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EDUCATIONAL NUMBER.

For more than forty years an Educational Number of The Chemist and Druggist has been published annually. This year's is now in preparation for publication on August 12. We shall be glad to receive information regarding local educational arrangements. Instructions to the Publisher for special announcements to be inserted in the issue as advertisements should be sent to him promptly.

Summary.

The more notable items only are dealt with.

The life of a *locum* appears to be quite pleasurable from the account given on p. 183.

Messrs. Edge's get-up of Dolly-blue has been protected by the House of Lords on appeal (p. 141).

Mr. Parry describes the characteristics of white pepper, as to which there is analytical dispute (p. 167).

Mr. G. Claridge Druce continues the description of his holiday, dealing with the Azores and its flora (p. 175).

Mr. Maskew, in an illustrated paper, deals with pharmacy in Utrecht and the characteristics of Dutch pharmacy (p. 177).

Dr. A. Rant has investigated a fungoid disease which affects cinchona in Java. Particulars of his results are given on p. 182.

The progress of Perk is continued. As a school-boy he made explosions; now he has become apprenticed to a chemist (p. 183).

Xrayser II. discusses the dearth of qualified men, tasteless cascara preparations, doctors' dispensing, and sal indicum (p. 149).

Mr. Dodsley, in his "Dispensing Notes," points out the value of a dispensing record-book and of a script typewriter for labels (p. 168).

Edinburgh chemists seventy years ago had rather long Sunday hours, as will be seen from an interesting table printed on p. 184.

Mr. Mortimer writes on the art of dressing chemists' windows, giving many illustrations and a list of exhibits month by month (p. 169).

An interesting account of work month by month on a materia-medica farm is communicated by Mr. W. Cornish, a veteran at that work (p. 164).

A series of Commercial and Produce Notes include observations in regard to shellac, the Turkish canary-seed crop, and the Camera Agrumaria annual report (p. 181).

The National Insurance Bill is quiet this week consequent on the political crisis, but the latest amendment to Clause 14 and other important matters are reported (p. 155).

Dutch pharmacists are concerned about the proposed tariff, especially on medicines. They want proprietaries to be taxed on value, on the British patent-medicine basis (p. 144).

A Bill to extend to Ireland Section 3 provisions of the Poisons and Pharmacy Act, 1908, as to company trading has been introduced by Captain Craig in the House of Commons (p. 154).

The meeting of the British Pharmaceutical Conference at Portsmouth is fully reported in this issue. Our report is prefaced by an account of Portsmouth pharmacists and pharmacies, illustrated with portraits and photographs of shops. This section occupies pp. 185-190.

A brief biography of Mr. W. F. Wells, the President of the Conference, prefaces his presidential address, which was on the Pharmacy Laws of the United Kingdom: and he contrasted British pharmacy with pharmacy in France and Germany, showing that our Legislature has much too little respect for the pharmacist (pp. 192-193).

The proceedings of the Conference were this year divided into two sections—Science and Practice—the latter being taken on Tuesday afternoon, when Secret Remedies, Pharmaceutical Education, and the National Insurance Bill were the subjects of debate (pp. 209-212).

The scientific communications are summarised in an editorial article beginning on p. 151.

CORNER FOR STUDENTS.

Conducted by Leonard Dobbin, Ph.D.

Oxidation and Reduction in Chemical Analysis.—V.

3. **Reduction by carbon, or by reducing gases of the Bunsen or blowpipe flame.**

a. **Borax beads.**—The reducing Bunsen flame is obtained by diminishing the supply of air admitted at the bottom of the burner until the inner cone of the flame shows a luminous tip about a quarter of an inch in length. The most powerful reducing effects are obtained by holding the beads steadily in the centre of this luminous tip, where there is, locally, insufficient air for completely burning the combustible matters of the coal-gas and where there is a very high temperature. The carbon monoxide, hydrogen, and hydrocarbons of the gas, together with the incandescent carbon of the luminous tip, tend to take up oxygen from any available source and to become converted into carbon dioxide and water, while the metaborates corresponding to the higher basic oxides gradually become reduced to those corresponding to the lower basic oxides, or even in some cases (such as those of copper and nickel) to the state of metal.

b. **Blowpipe and charcoal block.**—The reducing agents concerned here are the unburnt, or incompletely burnt, gases of the inner blowpipe flame, together with the carbon of the block itself. At the high temperature of the blowpipe flame, these reducing agents quickly take away oxygen from many metallic oxides and salts and yield beads of the metals. The sodium carbonate added to the substances under examination on charcoal is intended to act as a flux, forming sodium salts with acid radicals which were present in the original substances in combination with easily reducible metals.

c. **Film tests.**—The carrying out of film tests depends upon the reduction of certain metallic oxides, etc., which contain volatile metals, by heating them in the centre of the luminous tip (see 1. *c*, in article IV.) of the Bunsen flame. By holding the cold surface of the porcelain basin on which the film is to be collected, just immediately above the luminous tip, the vapour of the metal is suddenly cooled and part of it is condensed to the solid state before it can pass to the outer part of the flame, where (except in the case of mercury) it would become oxidised in contact with the surrounding air.

d. **Sublimation tests.** — When heated with a mixture of charcoal powder and dry sodium carbonate in a sublimation tube, compounds of mercury and arsenium yield sublimates of mercury and of arsenium respectively. The changes which occur are parallel to those involved when reducible substances are heated on the charcoal block with sodium carbonate in the reducing blowpipe flame.

4 **Reduction by potassium cyanide.**—In the cases of the more difficultly reducible metallic oxides, the reduction on charcoal in the inner blowpipe flame is greatly facilitated by heating mixtures of the substances with potassium cyanide. Simultaneously with the reduction of the metallic oxides the potassium cyanide, KCN, becomes oxidised into potassium cyanate, KCNO.

GAZETTE.

Partnerships Dissolved.

Knowles, R., and Phillips, J. A., Minories and Swan Street, London, wholesale and retail chemists and druggists, under the styles of Knowles & Phillips and Whinfield, Hora & Co.; also as retail chemists and druggists, Gresham Street, under the style of Knowles & Phillips.

Mordle, F. D., and Davis, E. P., Springfield Works, Basford, Nottingham, starch, chemical, and general manufacturers and merchants, under the style of F. Dare Mordle & Co.

ENGLISH AND WELSH NEWS.

When sending newspapers to the Editor please mark the items of news to which you desire to call his attention.

Brevities.

The rooms at the back of Mr. W. Boor's pharmacy, High Street, Wisbech, were damaged by fire on the evening of July 19.

Owing to the expiration of lease, Taylor's Drug-Stores, Ltd., are having their stock at 4 Guildford Street, Leeds, disposed of by auction.

The Guardians for the Blackburn Union have confirmed the appointment of Mr. Chas. H. Hacking, Ph.C., as dispenser at the workhouse in place of Mr. Beswick, at a salary of 30*l.* per annum for two hours' work on each weekday.

A fire broke out early in the morning of July 26 at the Cowper Street factory of Messrs. Stafford Allen & Sons, Ltd. The outbreak was confined to the pepper-grinding department, which was practically burnt out. The damage is estimated at over 10,000*l.* The drug department is unaffected.

At the Norwich Bankruptcy Court on July 19, the Official Receiver stated that nothing had been heard since June of Frederick Ackroyd Cotton, described as a chemist and druggist, of The Eagles, Wells-next-the-Sea. The liabilities amount to 1,546*l.* 8*s.* 1*d.* and the deficiency to 1,340*l.* We can find no person of that name on the Register.

There was a very large attendance at the funeral of Mr. Robert F. Graesser, of Argoed Hall, Llangollen, who died suddenly on July 15 (*C. & D.*, July 22, index folio 111). The mourners included a considerable number of clergymen and representatives of friendly societies. At the last rites a Welsh hymn was sung by the Choral Union, the officiating clergymen including deceased's son-in-law, the Rev. J. W. Thomas.

For the first time in their history, and through misunderstanding of a French foreman, Messrs. Crosse & Blackwell, Ltd., were on July 22 fined for employing three young women after 9 P.M. contrary to the provisions of the Factory and Workshops Acts. The inspector had found the girls making lemon-squash, instead of doing emergency work, cleaning strawberries, on which they would have been allowed to put in two hours extra.

Disinfecting Poplar

Dr. F. W. Alexander, Medical Officer of Health for Poplar, in his report for 1910, states that 50,726 gals. of electrolytic disinfecting fluid was produced during the year, making 140,000 gals. for the five years in which the system has been in operation, at a cost of 271*l.* for materials and electrical power. Bottles, labels, corks, etc., cost 269*l.* in addition. Previously carbolic disinfectants were used, the cost being 236*l.* in 1903, 275*l.* in 1904, and 314*l.* in 1905, besides cost of distribution. The medical officer tells in his report how the electrolytic fluid is used and with what results.

Contracts.

Wandsworth Borough Council.—Jeyes' Sanitary Compounds Co., Ltd., for supply of cyllin and old brown Windsor soap for the baths.

London County Council.—Eastern Optical Co., for the annual supply of spectacles at an estimated total value of 21*l.* (quantities not given for certain items).

Sale of Food and Drugs Acts.

The Poplar Analyst examined last quarter one sample each of arrowroot and olive oil. Both were unadulterated.

The Wandsworth Analyst (Dr. John Muter) in his last quarterly report states that two samples of medicine taken on prescription were found to be of the required strength.

In Poplar last year 370 samples were examined, among them pepper 2, syrup of squills 1, cinnamon 2, ground ginger 1, arrowroot 1, spirit of nitre 2, and paregoric 1. All were genuine except one spirit of nitre, which contained 0.71 per cent. less ethyl nitrite than required by the British Pharmacopœia. The vendor was cautioned.

The St. Pancras Analyst reports that during the past quarter he had examined five samples of arrowroot, two of castor oil. one of glycerin, three of Gregory's powder, one of magnesia, and one of olive oil. One sample of Gregory's powder contained 65 per cent. of magnesium carbonate, while the magnesia sample was found to consist of 100 per cent. of magnesium carbonate. The remaining samples were genuine.

National Association of Medical Herbalists .

Mr. Alderman H. Potter (Mayor of Stepney), at the annual conference of this Association held at Southport last week, opened a new herbal college erected in Scarisbrick Street. In doing so he mentioned that among all peoples the first practitioners of medicine were herbalists, and pharmacists came second. They had reached a second stage in their history in the opening of that college, and the day should come, must come, when their physicians would no longer be simply tolerated, but stand equal with any other system in the country and in their right to practise.

Women Pharmacists' Association.

At a meeting held at Gordon Hall, Gordon Square, London, W.C., on July 19, the following officers and members of committee were elected :

President.—Miss Margaret E. Buchanan, Ph C.
Assistant Secretary.—Miss Margaret I. Bedell, Ph.C.
Bureau Secretary.—Miss Constance A. Andrews, Ph.C.
Members of Committee.—Miss Dorothy Braithwaite, Ph.C., Mrs. Freke, Miss Alice Gilliatt, Ph.C., and Miss Ethel K. Hughes, Ph.C.

Birmingham Notes.

On Wednesday Messrs. Southall Bros. & Barclay, Ltd., held a reception of medical men at their factories.

On Saturday last Mr. Alfred Bird, M.P., gave a garden party in the picturesque grounds of Tudor Grange, Solihull. Some 2,700 persons were present.

Dr. Coole Kneale has again been elected teacher of pharmacy and materia medica for the coming session at the Birmingham Medical School in connection with the University.

Suburbanites in the direction of Water Orton, Minworth, and district are arming themselves to the teeth with disinfectants and prophylactics from the central pharmacies, to counteract the sudden development of evil smells arising from the Drainage Board's Sewage Farm at Tyburn.

The death took place last week, at the residence of his son, Pool Hall, Wishaw, of Mr. Robert Chase, in his ninety-first year. He established many years ago a large brush-business in Special Street, Birmingham, and certain classes of his goods were largely distributed by pharmacists. He was uncle to Mr. Thomas Chase, Ph.C., Five Ways, Edgbaston, and came originally from Sussex.

Nearly a quarter of a million flies were caught, mostly by fly-papers, last summer on the twenty-seven stations which the Birmingham Health Department established with a view to investigating the relationship between this summer pest and the infantile death-rate. Of 43,430 caught in fly-traps 30,325 were common house-flies, 9,482 lesser house-flies, 2,765 bluebottle-flies, and 858 of other species. The Medical Officer of Health discusses the relations of these to disease, but no definite data are given to establish the carriage of infection by flies.

The British Medical Association originated in the City of Worcester in 1834, a meeting being called under the presidency of Dr. Johnson, of Birmingham, and it was decided to form the Provincial Medical and Surgical Association, its objects being to encourage scientific research, improve the practice of medicine, and promote the interests of the medical profession. In 1856 the various local Associations were merged into the B.M.A., with headquarters in London. At the present visit, sixteen sections meet daily in the University buildings, from Wednesday until Friday.

Sheffield.

Mr. J. Gilbert Jackson has won the Club Prize at the Nether Edge Proprietary Bowling Green. He started from the limit mark 4 behind scratch. He beat his opponent, Mr. J. Coates, who had 6 start, 21-17.

The Sheffield Chemists' Cricket Club met the St. Mary's Church team on the home ground last week. The visitors were all out for 84 runs, Harboard taking six of the wickets. There was only forty minutes of play left when the chemists went in, and in that time they put together 68 at the expense of 6 wickets. The principal scorers were Coates (20), Massey (16), and Bradwell (11 not out).

Drug-trade Cricket Championship.

Burgoyne, Burbidges & Co.'s C.C. played Stevenson & Howell's C.C. at Wadham Lodge on Saturday, July 22. The match resulted in a win for the B.B. Club. Scores : B.B.C.C. 87 (Gardner 40, Bailey 28 not out) ; S. & H.C.C. 21. For the winners Martin took 5 wickets for 6 runs, and Sullivan 5 wickets for 12 runs.

From Various Courts.

At Birmingham Assizes on July 19, Alice Jackson was sent to a Borstal institution for eighteen months for administering poison to Mrs. Shannon, who had befriended her.

At Guildford Assizes on July 19, death sentence was passed on Kate Renrith (22), who poisoned her thirteen-day-old child at Croydon with spirit of salt (*C. & D.*, 1911, I., index folio 341). The Home Secretary has since granted accused a reprieve.

At the Manchester City Police Court, Frank Cressley, described as an analytical chemist, was remanded on a charge of obtaining a microscope, value 5*l.* 7*s.* 6*d.*, by false pretences from Messrs. Flatters & Garnett, Ltd., Dover Street, Manchester.

At Norwich on July 21, Samual Bullen, a vermin-destroyer, was fined 5*l.* and 30*s.* costs for selling poisoned grain at Norwich on June 17. The National Society for the Prevention of Cruelty to Animals prosecuted. Mr. Lincolne Sutton, F.I.C., deposed that the grain was heavily dosed with strychnine.

In the City of London Court on July 24, before Judge Lumley Smith, K.C., the Consol Automatic Aerators, Ltd., 22 Paul Street, recovered from Mrs. Ada E. Wotton, 491 Latimer Road, Wormwood Scrubbs, 28*l.* 4*s.* 3*d.* on bills of exchange given for a soda-water machine to the British Automatic Aerator Co., Ltd.

At Brill on July 17, Markhams, Sons & Co., Ltd., of Siddals Mills, Derby, were summoned for three breaches of the Fertilisers and Feeding-stuffs Act in connection with the sale of cod-liver-oil condition-mixture. The charges were found proved, and fines and costs amounting to 15*l.* 5*s.* 6*d.* were imposed. Notice of appeal was given.

At Swansea Assizes on July 25, James Elias Parfitt (25), haulier, was found guilty of the manslaughter of Charles Herbert Boote, described as a chemist, at Pontypridd. It was alleged that the accused got possession of a gun and, after firing at a cart and a lamp-post, shot the deceased, who had just passed him. Prisoner was sentenced to eighteen months' hard labour.

At the Central Criminal Court, London, on July 23, Frederick Brooks (37), journalist, and Harry Stone (42), traveller, were found guilty of obtaining photographic goods, patent medicines, and other articles by means of cross-references from businesses they carried on under the styles of "Mark Sidney Gage & Co." and "H. M. Brook & Co." Brooks was sentenced to five years' penal servitude, and a similar punishment of three years' duration was imposed upon Stone. Mark Sidney Gage, also charged in this connection, was acquitted, while a fourth defendant, named Hans Muller, had absconded.

IRISH NEWS.

When sending newspapers to the Editor please mark the items of news to which you desire to call his attention.

Brevities.

Mr. J. H. Hutchinson (Messrs. James Black & Co., druggists), 76 Shankhill Road, Belfast, has passed his Final Medical examination at the University of Edinburgh.

Mr. J. Suche, Ph.C. (late of Messrs. Hayes, Conyngham & Robinson), and Mr. J. J. Fitzgibbon, of the Sandycove Pharmacy, have purchased the interest and premises of Kavanagh's Medical Hall, Kingstown, recently conducted by Mr. C. P. Fairweather, Ph.C. The business will be carried on under the name of Suche & Fitzgibbon, pharmaceutical chemists, Kingstown and Sandycove.

Chemists' and Druggists' Society of Ireland.

A meeting of the committee was held on Thursday, July 20, at 11 Waring Street, Belfast, for the purpose of considering the National Insurance Bill. Mr. Robert Cambridge, President, occupied the chair, and there was a good attendance. It was resolved to send copies of the Society's circular against the Bill (which has already been sent to Irish M.P.s.) to every member of the trade asking them to co-operate by writing to their own M.P.s, urging the claims of the chemists and druggists and registered druggists, and also by joining the Chemists' and Druggists' Society of Ireland and strengthening its hands at the present crisis. The circular contains the following passages :

> If either the large Friendly Societies or the pharmaceutical chemists get the sole right to dispense the orders issued by the doctors, then, as these orders will be written by a medical man, they will be deemed to be prescriptions (in Ireland), and as the chemists and druggists and registered druggists (in Ireland) have not the power at present to dispense prescriptions, they will be barred from handling these orders even if the orders in question were for some ordinary simple drug, such as turpentine, lime-water, linseed meal or oil, or vaseline. All this class of goods the public come direct to the druggist for at the present moment, as well as getting their advice on and their supplies of drugs for the minor ailments of themselves and children. This business in its entirety would be lost to them, and not only that, but every other class of trade in sundries and medical appliances, such as enemas, breast-exhausters, nipple-shields, etc.; for wherever the person with the order went to get it dispensed, he or she would naturally purchase every other requisite, rather than trouble going to two different places of business, when he or she could obtain all they require in the place where they got the order dispensed: so that should the pharmaceutical chemists get the sole right to handle these orders, they would not only get the benefit arising from them direct, but also the extra business accruing from the embargo placed upon the doctors in preventing them from compounding or dispensing their own prescriptions, which the great bulk of them do at present. Thus some 860 pharmaceutical chemists would also stand to capture the whole trade of almost 800 chemists and druggists, which would be inequitable and unjust, while the Government would, at the same time, be practically creating a monopoly for the pharmaceutical chemists to the detriment of the druggists and the public generally.
>
> Then again, the druggists have been accustomed supplying various preparations of their own to meet the wants of the public, such as cough-mixtures, indigestion-mixtures, blood-purifier, liniments, etc. All this trade will also be lost to them, for, from their experience in the past, when the public can get their requirements for nothing, not even the most respectable will, under any circumstances, pay for them, and especially will it be so in this case when they contribute a little. Besides, it would cause very great financial loss, for, as business is at present with most, it will not admit of any margin taken off, and would be certain to put many out of business, if not into the bankruptcy court, as a result.

John Clarke & Co., Ltd.

In connection with the liquidation of John Clarke & Co., Ltd., wholesale druggists, Corporation Street, Belfast, the Master of the Rolls has directed that the liquidator convene separate meetings of the debenture-holders, the unsecured creditors, and the contributories of the firm. Application was made to that effect for the purpose of considering and approving a scheme of arrangement proposed to be made between the company and its debenture-holders and unsecured creditors, whereby the debenture-holders would be paid in full, and the company further offered a composition of 10*s.* in the £ on its unsecured debts and engagements in four equal instalments, payable at three, six, nine, and twelve months, the last instalment to be secured by Mrs. Clarke and Dr. George Clarke, the shareholder-depositors not to receive any dividends on their debts until the other unsecured creditors had been paid their respective compositions of 10*s.* in the £ in full, and the estate to remain vested in the liquidator until the composition had been fully paid.

Frauds on English Firms.

On July 20, at Belfast Assizes, a man named Jas. McClean was charged with defrauding several English firms, including the Miol Manufacturing Co., London, Cerebos, Ltd., Greatham, Durham, and Fry & Co., Bristol. Prisoner pleaded guilty to several of the charges. Among the witnesses were Mr. W. J. Hopkinson, of the Miol Co., and Mr. T. T. Edwards, manager of Messrs. Neave & Co., Fordingbridge, the latter being one of the firms for whom prisoner reported that he was agent, others being the proprietors of Pears' soap and Babbitt's soap. Mr. Thos. Campbell addressed the court in mitigation of sentence, and Mr. Gordon, K.C., for the prosecution, said that the sums involved in the other cases were large, and he had to say that, although he would take the pleas which had been entered and offer no evidence in the other cases, the Judge had the prisoner's record and he would leave the matter with him. Mr. Justice Boyd, in passing sentence, said that there were seven charges of false pretences against the accused, who had obtained large sums of money and a large amount of goods by fraud. He had got credit from various firms by falsely representing he was an agent for other firms and had omitted to pay. That sort of thing had been going on since 1898 and must be stopped. He found that at the Dublin Commission the prisoner had been convicted of false pretences and sentenced to twelve months' imprisonment with hard labour. He would not send him to penal servitude on this occasion, but would sentence him to two years' imprisonment with hard labour.

Chemists' Premises Burgled.

At Belfast Assizes on July 20, before Mr. Justice Boyd, two men, named James and Joseph Thompson, pleaded guilty to breaking and entering the pharmacy of Mr. Samuel L. Cleland, Ph.C., 8 Duncairn Buildings, Belfast, on June 11, and stealing a pistol and cartridges. The prisoners also severely injured a constable who detected them in the act. The Judge sentenced the prisoners to five years' penal servitude.

At the same Assizes, Joseph Sheppard and Robert Walsh were tried for breaking and entering the premises of Mr. David Manson, druggist, 79 Peter's Hill, Belfast, on May 17, and stealing ointment, health-salts, combs, brushes, etc. The accused were convicted chiefly through a counterfeit shilling taken from the premises and which they subsequently attempted to pass. Each received a sentence of two years' imprisonment.

SCOTTISH NEWS.

When sending newspapers to the Editor please mark the items of news to which you desire to call his attention.

Brevities.

At the Annual Graduation Ceremonial in Medicine of Edinburgh University the degrees of M.B. and Ch.B. were conferred upon Mr. Leonard Willox, Ph.C., who, during his curriculum, gained class honours in his examinations twenty-four times, and for five years in succession he was elected a member of the Students' Representative Council.

Mr. Samuel Lawrence, chemist and druggist, 101 George Street, Oban, has published the "Oban Visitors' Guide" for the 1911 season—the twenty-first year of publication. It contains in a concise form a good deal of information about the district, how to reach it, where to tour and what to see, and is illustrated. The "Guide" has helped many a tourist in his way about the district, and we have no doubt that Mr. Lawrence finds it an excellent advertisement for his business.

FRENCH NEWS.

From the "C. & D." Paris Correspondent.)

Burglars broke into the pharmacy of Dr. Henry Martin, Faubourg St. Honoré, Paris, last week. They broke the plate-glass front and made off with the contents of the till, about 32*l*.

Among the Militants.—The visit of twenty or thirty delegates of French trades unions affiliated to the Confédération Général du Travail to Berlin is one of the political events of the week. Among the group which left Paris on Saturday evening, July 22, was M. Diem, representing the Pharmacists' Assistants' Association (Syndicat de Préparateurs en Pharmacie).

An International Subscription has been opened to offer a presentation medal to Sir Patrick Manson, in acknowledgment of the world-wide services he has rendered to humanity by the creation of Institutes of Tropical Medicine, etc. The well-known sculptor and medal-engraver, M. Paul Richer, member of the Academy of Medicine and the Academy of Fine Arts, is (as our French friends say) "quite indicated" for the execution of such an artistic memorial. It will be of "plaquette" form, about 2 in. by 3 in., and will bear Sir Patrick's portrait.

Cocotte and the Carbolic.—During the recent heat-wave part of the roadway of the Boulevard des Italiens was watered with a 1-in-12 solution of carbolic acid. The café proprietors and habitués did not object to the odour; it was, they said, grateful and refreshing. But the horses became terribly restive when passing over the newly watered wood-pavement, and this "manifestation" on the part of patient Cocotte has aroused the sympathies of the authorities, who consider there must be something abnormal about any circumstance which can arouse the Parisian cab-horse from its usual mood of misanthropic meditation. They have accordingly decided to substitute a 1-in-120 solution, as used for long years around the Halles district.

Legacies for Scientific Research.—The story of the romantic life of a French boy of humble origin has been made public by the announcement of various bequests for scientific research made by M. Auguste Loutreuil, who died in Switzerland recently at fifty-three years of age. This gentleman has left : 100,000f. (4,000*l.*) to the Pasteur Institute, Paris; 1,000,000f. (40,000*l.*) to the Caisse des Recherches Scientifiques; 2,500,000f. (100,000*l.*) to the Paris University; and 3,500,000f. (140,000*l.*) to the Paris Academy of Sciences. M. Loutreuil was a native of the village of Sées in the Orne department. His parents were in very moderate circumstances, and he made his way to Moscow, where he worked for a time as a bookkeeper and studied engineering in his leisure time. He finally took part in company flotations with signal success, identifying himself especially with sugar-refineries, railways, and cement-works. Latterly he had been a leading figure in the development of Russian industries, and before his decease he was already known for his munificence in supporting charitable institutions.

Academy of Medicine.—Dr. A. Terson, after careful examination, has come to the conclusion that the popular belief that dental troubles affect the eyesight is not without some foundation. It is, however, rarely the eye-teeth, but usually the first upper molars which affect the eyes, and even sometimes the brain. But all the teeth may be the cause of ocular maladies, according to the paper read by Dr. Terson at the Academy of Medicine on July 18. At the same meeting M. Reclus made some remarks on the anæsthetic effect of novacaine, which he prefers to cocaine or stovaine in certain operations. Dr. Paul Raymond and colleagues have concluded from the scientific examination of some ancient skeletons that syphilis is as old as the Stone Age; and was, therefore, not (as is often affirmed) brought from the New World by the companions of Columbus. Dr. Morel-Lavallée has remarked that many "morphinomaniacs" take no pleasure in the drug unless they personally handle the syringe, and thinks that in such cases ("keutomania") this peculiarity might be made a basis for definite cure of the habit. Professor Guignard, ex-Director of the Paris Superior School of Pharmacy, formally presented to the Academy a volume on "The Useful Vegetable Products of Tropical Africa : Kola, etc.," by Professor Perrot and Dr. Chevalier. He described the book as the most complete work yet published on this subject.

AUSTRALASIAN NEWS.

"The Chemist and Druggist" is regularly supplied by order to all the members of nine Societies of Chemists in Australia and New Zealand, as well as to other Chemists in business there.

The Commonwealth.

The Imports and Exports for March 1911 published by the Commonwealth Statistician in June show that the exports of Australian origin were valued at 6,069,298*l.*, compared with 6,261,028*l.* for the corresponding month of last year. The imports of drugs and chemicals were valued at 82,854*l.*, as compared with 91,803*l.* for the same month of last year. The total imports were 5,753,202*l.* and 4,907,876*l.* for the respective periods, while the total exports were 6,394,185*l.* and 6,493,517*l.*

New South Wales.

Flotation Process for Extracting Copper.—This process was first used at Broken Hill, in New South Wales, but its use is extending widely. The crushed and ground ore is mixed with water into a cream, and 4 lb. of oil of eucalyptus containing phellandrene is added to each ton of ore; the copper is absorbed by the phellandrene and this floats to the top of the magma. The oil is removed by distillation. The oils of eucalyptus containing phellandrene appear to be the only oils suitable for the purpose, and their use in the extraction of copper has enhanced the value of these oils considerably. Inquiries for phellandrene-yielding oils are now being made all over the eastern States of Australia, and an increased production of these oils has resulted. Labour conditions are, however, a great drawback to the eucalyptus-oil industry, as they are to other industries.

Queensland.

Pharmacy Act Case.—The Magistrates' Court, Brisbane, on May 20, dismissed a charge against George Thiele, brought by the Registrar of the Pharmacy Board, for infringing the Pharmacy Act. This was the third hearing. Thiele, who is not a registered chemist, exhibited at premises at 366 George Street signs bearing the words "Thiele's Pharmacy, Cash Chemists," and "Thiele's Little Liver and Antibilious Pills," and there were in the window carboys which it was alleged might be construed to mean that the proprietor was a qualified chemist. It was admitted that the words "Alexander M. Gordon, Pharmacist, Manager," appeared over the doorway, and Mr. Gordon, in his evidence, said that he caused the sign "Thiele's Pharmacy" to be placed over the shop, and considered he was perfectly in order in doing so. The Magistrates allowed 15*l.* 10*s.* costs.

Tasmania.

Food and Drugs Act.—Standards and regulations made under the Food and Drugs Act, 1910, were published in the "Tasmanian Government Gazette" on May 16. These are, with certain modifications, the regulations drawn up by the Interstate Departmental Conference on uniform standards for food and drugs held in Sydney last year. Some alterations have been made in the Conference wording regarding infants' food. Infants' food is defined as "composed of food substances modified, prepared or compounded so as to possess special nutritive and assimilative properties which render it specially suitable for use as food for infants." The principal label is to contain a statement of the ingredients contained in the food and of the properties or grounds on which the claim of special suitability for infants is based. The regulation comes into force on March 1, 1912. Definition of "antiseptic" and "preservative" have been introduced. The words "disinfectant" and "germicide" must not be used in connection with any compound which is not effective for the purpose of killing the germs of disease. By regulation 85 it is illegal to sell any feeding-bottle with a long glass or other tube within the bottle.

Hankow Wood-oil.—The exports from Hankow during 1910 amounted to 901,140 cwt., valued at 868,321*l.*, as compared with 550,118 cwt., valued at 471,728*l.*, in 1909.

Persian Opium.—The exports of opium from Basra (Persian Gulf) during 1910 amounted to 1,253 cases, against 1,288 cases in 1909 and 909 cases in 1908.

SOUTH AFRICAN NEWS.

"The Chemist and Druggist" is regularly supplied by order to all the members of the seven Societies and Associations of Chemists in British South Africa, as well as to other chemists in business there.

Cape Province.

Personal.—Mr. N. W. Quin, representing Messrs. Stevenson & Howell, Ltd., was a passenger by the last mail from the Cape.

Chemists' Dance.—The Amalgamated Chemists' Cricket Club gave a Cinderella Dance in the Goede Trouw Hall, Cape Town, on July 3. Upwards of seventy couples spent an enjoyable evening, and among the dancers were Mr. F. C. Mathew and Mr. H. J. Kinlay (Heynes, Mathew & Co., Ltd.), Mr. Lionel Walsh (manager Lennon, Ltd.), Mr. G. R. Cleghorn (member of Colonial Pharmacy Board), and Mr. Patterson (Burroughs Wellcome & Co.).

May Trade.—The month's imports of drugs and chemicals into the Union of South Africa for May (taken from the official Customs figures) show a decline of 2,688*l.*, the total being 66,389*l.*, against 69,077*l.* Some of the more interesting items include: Apothecaries' wares, 11,358*l.* (May 1910, 8,501*l.*); medicinal preparations, 9,409*l.* (May 1910, 10,879*l.*); sodium cyanide, 710,551 lb. (May 1910, 907,486 lb.); potassium cyanide, 27,048 lb. (May 1910, 62,664 lb.). For the five months the total imports into the Union amount to 377,270*l.*, against 330,588*l.* for the corresponding period of 1910.

Colonial Medical Council.—The ordinary monthly meeting was held on Tuesday, June 6. Dr. Murray (President), Drs. Petersen, Darley Hartley, Beck, Wood, and Johnston, and the Secretary and Assistant Secretary were present. The subjects under discussion included very little of interest to chemists, most of them being of a parochial character. With reference to a letter inquiring whether practice as a dental mechanic was lawful, it was decided by the Council to point out that unregistered persons may only do mechanical work of the kind contemplated for and on behalf of a registered dentist.

The Shipping Strike.—The average man in the streets of Johannesburg, Durban, or Cape Town has little idea of the shipping strike in Europe. It is only brought home to him when he fails to get his mail, but it would never occur to him that it throws the whole of South Africa out of gear. The trains cannot run to schedule, be they of the fast passenger service or of fast freight. The harbour authorities are thrown out of their reckoning from Cape Town to Lourenço Marques on the east coast, and not only accidents have taken place in the shape of derailed trains, but the whole working is thrown out of gear. South Africans are so used to seeing the mail steamers "on time" that the existing situation comes as a shock.

A Commission Dispute.—In the Supreme Court of South Africa (Cape Province), Cape Town, before the Hon. Justice Maasdorp, Judge-President, an application of Martin Elgar, Ltd., Cape Town, against F. Stearns & Co., Detroit, Mich., U.S.A., was heard. The plaintiffs claim a certain sum due in respect to commissions; further, a certain sum alleged to have been wrongfully paid out, that belonged to the plaintiffs but in the hands of the defendants, to one Wm. H. Martin, a brother and executor in the estate of the late Robert Rowlette Martin, the last named being a stockholder in the company. It was stated that the corporation of F. Stearns & Co. had a contract with Martin Elgar, Ltd. (a joint-stock company operating under the laws of the Cape Province), and that on the death of Robert Rowlette Martin, who was a director of Martin Elgar, Ltd., plaintiffs allege that F. Stearns & Co. paid out moneys due to the company without sanction; further, had failed to settle their account. Counsel having been heard, the Judge granted a warrant to attach goods belonging to the defendants, personal service to be made, in default of which the order will be made absolute on September 12 next.

Importer's Licence.—A case of considerable interest to chemists in the Cape Province was heard at the First Criminal Court, Cape Town, on June 29, before the Hon. C. P. de Villiers. A trader by name of Monees Bloch was summoned for not taking out an importer's licence, he having since January of this year imported goods to the value of 1,200*l.* For some time it has been customary at the Cape to take out a general dealer's licence for 5*l.*, which licence covered imports up to 1,200*l.*, and when this amount was exceeded the Government notified the trader. The Government found this plan unworkable, so a notice was published in the "Gazette" placing the onus on the dealer. The majority of such traders, it should be stated, never see the "Gazette," and the same may be said of chemists. The defendant said that he was not a member of the Chamber of Commerce, so could not get information from this source, nor had he seen any notice in the papers. Another importer was also charged for committing the same offence, and gave similar evidence. The Hon. C. P. de Villiers expressed astonishment at business-men being so ignorant of the law, but discharged both defendants with a caution.

INDIA AND THE EAST.

(From the "C. & D." Correspondents.)

The Japanese Pharmacopœia is to be issued in a revised form at the end of 1915. The present edition is being unfavourably criticised.

Sahachiro Hata, joint inventor of "606," has been appointed by the Emperor of Japan "Knight of the Double Ray of the Rising Sun."

European Methods.—Dr. Asahina, who is at Zürich studying pharmacy, is by special order of the Minister of Education to remain in Germany for another year.

Regulating New Remedies.—The Minister of the Interior is about to issue a new ordinance for regulating the importation and sale of new remedies and preparations.

Acetone Industry.—Dr. Tahara, director of the Tokyo Hygienic Laboratory, who recently visited Europe and America, has been sent to Saghalien to investigate the wood-acetone industry there.

A New Calcutta Hospital.—To commemorate in a permanent and useful manner the approaching visit of his Majesty the King Emperor, a new native hospital, to be called the King's Hospital, is to be built at 302 Upper Circular Road, Calcutta.

Proprietaries in Penang.—Mr. Shokichi Nittam, the Marsan Drug-house, Penang, urges the Japanese proprietors of specialities to spend money on posters and circulars for advertising their goods in Penang. Japanese remedies are in favour with the inhabitants, but the directions for using must be in the native language.

Indian Government Quinine.—The order of Government on the working of the Government cinchona plantations has just been issued, and shows that quinine cost Rs.9 3a. per lb. to manufacture as compared with Rs.7 12a. 5p., the cost of production in the previous year. The price charged for quinine supplied was Rs.8 8a. to medical depôts and Rs.8 to Government institutions and municipal dispensaries.

The Spirit Question.—The import of odourless methyl alcohol from the United States is increasing greatly, so much so that some native spirit-distillers have had to close down. It was thought that raising in the revised tariff the duty on methyl alcohol from 15 per cent. to 30 and 35 per cent. would have improved the outlook fo native spirit.—Mr. Sanya Mori, chief chemist of the Da Nippon Seiyaku Kwaisha, Osaka, has patented an apparatus for deodorising alcohol.

Oldfield's Dispensaries, Ltd.—A combination an flotation have taken place between Mr. H. M. Hodges, pr prietor of Oldfield's Dispensary, Ipoh, Perak, Federat Malay States, and Dr. R. M. Connolly, proprietor of t Medical Hall. The company has been formed with capital of $80,000, and will trade under the title of "Ol field's Dispensaries, Ltd." The management will be in t hands of Mr. H. M. Hodges, chemist and druggist, w Mr. W. J. Blair as branch manager at Telok Anson.

OUR GERMAN LETTER.

(Special Correspondence to the "C. & D.")

THE forthcoming annual meeting of the German Apotheker Verein is being preceded by the customary debates on the subjects to be discussed on that occasion. The present position of German pharmacy is not without interest. Never has the steady undermining of the pharmacist's economic position and refusal of the authorities to provide a remedy been made more patent than at present.

First and foremost comes the position of the pharmacist under the new insurance laws, for instead of improving his financial status these contain some provisions of a decidedly detrimental character. Pharmacists have a monopoly of making up prescriptions and selling remedies, but a number of articles used for medicinal purposes may be sold by anyone. Sick-clubs know that, and supply such things to their members. This applies particularly to surgical dressings and various tonics, etc. Another vexed question is the ordering of medicines by the doctors in such a way that no dispensing-charge can be made. These and other things reduce the pharmacist's profits; and as the State legalises many such departures from established charges, the German pharmacist is coming to the conclusion that his salvation lies more in self-help than in reliance on assistance from the Government, and that it is rather to his advantage to preserve what little there is left to save by not adhering too strictly to the application of the demands he is by law entitled to make, and actively compete with other purveyors to sick-clubs.

The association for the protection of the interests of the sick-clubs has published the draft of a contract with pharmacists, in which they stipulate for a rebate of 15 per cent. on the prescription-charges, and exclude the supply of wines, brandy, mineral-waters, surgical dressings, and spectacles. If a prescription should come to more than 4*s.* the pharmacist must first obtain permission of the club officials to dispense it. Special preparations placed on the market by the manufacturers in packages ready for sale are to be charged at a profit of 50 per cent. on cost price (instead of 60 per cent.), while perles, capsules, and tablets, even if prepared by the pharmacist, shall not be charged according to the tariff rates, but on the basis of the cost price of wholesale articles. The "counter sale" articles are to be dispensed in the same way as ordinary prescriptions, but should the directions for use exceed three words the pharmacist is entitled to charge 5 pfennigs (½*d.*).

The Imperial Government having decided to drop the question of pharmacy reform on a uniform basis, this is now left to the several States to deal with. The obstacle lies in the future position of the privileged pharmacies—businesses dating from earlier times, which may be freely sold and bought, a high price being paid for the mere privilege. It was proposed to buy these up by a fund to which all pharmacists should contribute according to their turnover. Now the Apotheker Verein proposes the same course as a private undertaking, but pharmacists demand financial assistance from the State as well. The union of apothekers not owning pharmacies has now adopted the demand for "free trade" in pharmacy—*i.e.*, the introduction of such professional liberty as exists in Great Britain and other countries.

The question of creating a central fund for the payment of assistants' salaries again figures on this year's programme. Although the system has now been working in Austria for two years to the evident satisfaction of both parties, there seems to be a lack of enthusiasm about it among German pharmacists. Briefly this scheme consists in every pharmacist paying into a common fund a fixed amount, which represents his outlay for an assistant. The assistants are paid by the fund in accordance with a fixed scale of remuneration, rising with his age. It is evident that a scheme so incompatible with the established custom of remunerating services in accordance with the employer's appreciation of the same, and the laws of demand and supply, can only be justified by the peculiar conditions of "restricted" pharmacy.

Such are a few of the subjects which the members of the Verein will discuss next month, and they will deserve all the hospitality and sociality which the occasion affords, for "the old order changeth," and the new has not yet definitely evolved, so they will not be happy till they get it.

British Sulphate of Copper in France.—Of the total imports of 655 tons into Marseilles last year, 652 tons were imported from the United Kingdom during 1910, or 150 tons more than in 1909. The amelioration in the condition of the vine-growing industry has increased the demand. Mr. Vice-Consul Nègre reports from Cette that since sulphate of copper works have been established at Bordeaux, imports of that article have ceased at Cette.

LEGAL REPORTS.

House of Lords.

"Dolly" Blue Appeal.

In the House of Lords on July 21 judgment was given in the appeal by W. Edge & Sons, Ltd., Bolton, against the judgment of the Court of Appeal (*C. & D.*, 1910, II., 786) reversing the judgment of Mr. Justice Swinfen Eady granting an injunction against W. Niccolls & Sons, Ltd., Darwen, restraining them from getting up laundry-blue with a stick in it like the plaintiffs' blue. Their Lordships allowed the appeal, and the principal judgment was given by Lord Gorrell, who, in the course of his remarks, said the principle to be applied to a case of this kind was expressed by Lord Halsbury in the case of the Birmingham Vinegar Brewery Co., Ltd. *v.* Powell—viz.:

> "No man can have any right to represent his goods as the goods of another person, but in applications of this kind it must be made out the defendant is selling his own goods as the goods of another."

The real question in the case is one of fact—viz., whether the defendants' goods so resemble the plaintiffs' as to be calculated to deceive the persons who buy. "If the plaintiffs were attempting to prevent the use of a 'stick,' I should agree," said his Lordship, "with the decision of the Court of Appeal, and I think that that court regarded the disclaimer of counsel as an attempt to limit a claim which had not been and was not being effectively limited. But when it is admitted that the defendants have copied the appearance and arrangement of the plaintiffs' goods and distinguish theirs only by a label, and when it is perfectly possible to distinguish goods which contain similar elements of utility in many other ways suggested, so that there should be no reasonable probability of mistake, it seems to me that the label alone in the particular circumstances is not, for the reasons which I have given, sufficient."

Lord Robson read a judgment to the same effect. Lord Atkinson and the Lord Chancellor concurred. The appeal was accordingly allowed, with costs.

High Court Cases.

Unless when otherwise stated these cases have been heard in the High Court of Justice, London.

Thermal Syndicate, Ltd., v. Silicaware, Ltd.

The hearing of this case was continued on Monday and concluded on Tuesday, when his Lordship reserved his judgment.

Pear-shaped Bottles for Meat-juice.

In the Chancery Division on July 21, a motion in the case of Valentine's Meat-juice Co. *v.* George Mason & Co., Ltd., and P. B. Cooper was mentioned to Mr. Justice Warrington. Mr. Sebastian, for the plaintiffs, said they sold meat-juice in pear-shaped bottles, and the defendants were using similar bottles. The defendants were not to contest the case. They had agreed to treat the motion as the trial of the action, and to consent to a perpetual injunction on agreed terms, and were to deliver up any bottles and moulds which they might have and to pay the costs of the action. His Lordship made an order on the terms agreed upon.

The Sale of "Oxo."

In the Chancery Division on July 21, before Mr. Justice Eve, Mr. A. H. Jessel, K.C., moved on behalf of Messrs. J. Lyons & Co., Ltd., for an injunction to restrain the Earl of Plymouth and others, who are at present managing the Festival of Empire at the Crystal Palace, from selling "Oxo."

Mr. Lawrence, K.C., said he appeared for Liebig's Extract of Meat Co., Ltd., who were joined as defendants in the action, and he had not yet seen any evidence in the action, and therefore asked for an adjournment. The leave to move was only given to the plaintiffs on July 18.

Mr. Church said he was in the same position as regards the first-named defendants.

Mr. Jessel said he had now filed evidence. The plaintiffs had complained of the sale of Oxo for a long time, and had a number of assurances that it should cease, and they were exceedingly anxious to make the motion effective.

Mr. Justice Eve : This is hardly the weather for Oxo.

Mr. Lawrence : We say it is, because it is a cooling drink—sustaining and cool.

Mr. Jessel : We shall be glad to show your Lordship an alternative drink. (Laughter.)

Mr. Justice Eve said he would not want much tempting. (More laughter.)

Ultimately the motion stood over, the defendants undertaking to file evidence within three days.

Pharmacy Acts.

Sale of Paregoric.

At the Edmonton County Court on July 20, the Pharmaceutical Society summoned S. Hammond, Middleton Road, Bowes Park, for 5l., being the penalty incurred for selling opium contained in paregoric. Mr. Quarrell represented the Society. The defendant did not appear, but an admission by him that he made the sale, and that he did not intend to contest the case, was produced. After evidence for the prosecution, his Honour (Judge Wheeler, K.C.) imposed the penalty of 5l. At the written request of the defendant he directed that it should be paid in three instalments.

County Court Cases.

Liability for a Son's Medicine.

At Lampeter County Court on July 19, before Judge Lloyd Morgan, Mrs. M. E. Davies, trading as Davies Bros., chemists and druggists, Lampeter, sued David Lewis Davies, of Barley Mow, for 8l. 4s. 6d., due for goods supplied to defendant's son. It was stated that the medicine supplied was fetched by defendant's wife, and although payments were made at various times, the defendant repudiated the claim when his son died. The question raised was whether the father was liable for medicine ordered for a son who was of age. On it being intimated that deceased's brother had offered to pay 5l., the Judge said it was quite clear that some portion ought to be paid, but he adjourned the case to see if some settlement could be arrived at.

Arsenical Poisoning from Coal.

At Blackburn County Court on July 20, a case of general interest under the Workmen's Compensation Act was heard. T. F. Smith, who worked for the British Humidifier Co., Ltd., Blackburn, had received 1l. per week since 1909 on the ground that he had been arsenically poisoned while following his employment. The company now said that Smith no longer suffers from the poisoning, and asked for a termination or diminution of the order. Dr. Bannister said it was possible for arsenical poisoning to be so severe as to completely destroy the power of the muscles. Respondent's case was the severest of arsenical poisoning he had ever seen. The older the person the slower was the recovery. He did not think respondent was fit for the work he formerly did. Counsel asked : "Do you seriously suggest there is any large amount of arsenic in common coal ?" To which the doctor replied : "Yes ; an investigation has shown that there is 1½ grain of arsenic in 1 lb. of soot." The Deputy-Judge dismissed the application, with costs.

A Doctor's Agreement.

At the Brighton County Court on July 21, William A. Griggs, M.R.C.S., L.R.C.P., 60 Montpelier Road, Brighton, asked for an injunction to restrain Percy L. Hope, M.R.C.S., L.R.C.P., 61 Montpelier Road, from practising in any medical, surgical, or electro-therapeutical capacity in accordance with the terms of an agreement, and he also claimed 20l. as damages for breach of agreement.—Plaintiff purchased a practice from defendant on March 2, 1910, for 500l., 250l. being paid down and the balance to be paid within two months. After some correspondence 150l. was accepted in full settlement. In December defendant approached him and asked to be taken on as an assistant ; witness refused, and in January defendant came to reside next door to the plaintiff and commenced to practise. Evidence of this was given. For the defence it was said that plaintiff having compromised by paying 150l. instead of the balance of 250l., had broken the agreement, and therefore defendant could not be bound by it.—The Judge said that any compromise made must have been agreed to by the defendant. Plaintiff was granted a perpetual injunction, and was awarded 20l. damages, with costs.

A Nut-oil Case.

Before Mr. Sheriff Burchell and a jury, at the County of London Sheriffs' Court, on July 21, the Compagnie Commerciale et Industrielle Société Anonyme sued William Young, St. Paul's Street, Stockport, for 301l. 14s. 1d. for breach of contract. Mr. W. E. Greaves, for the plaintiffs, stated that they sold 50 tons of nut oil to the defendant, who had failed to pay for it.—The defendant at the outset objected to the jurisdiction of the court on the ground that the necessary notice of motion for judgment had not been served upon him, but his objection was overruled.—Mr. Greaves said the defendant agreed to purchase the oil at 45l. 8s. 9d. per ton, the price payable for the whole consignment being 2,180l. The defendant wrote that the invoices arrived too late for him to do anything with them, and expressed the hope that the plaintiffs would be able to obtain better returns at spot prices than at the prices lately current.—There being no defence, a verdict for the amount claimed was returned.

BANKRUPTCY REPORT.

Re Joseph William Ratcliffe Sutton Bridge, Lincoln, Chemist and Druggist.—The following are creditors ; The British Drug Houses Ltd., London (18l.) ; Blundell, Spence & Co., Ltd., Hull (13l.) ; F. T. Cooper, Sutton Bridge (105l.) ; Evans Sons Lescher & Webb, Ltd., London (27l.) ; Shadford & Co., Spalding, (86l.).

DEED OF ARRANGEMENT.

Charles, Thomas Watkin, 9 High Street, and **Charles Henry Lee,** 15 Bromley Road, both Beckenham, and traded at both the aforesaid addresses as Charles & Lee, Chemists and Druggists.—Trustee : O. Sunderland, 15 Eastcheap, London, E.C. Dated, July 14 ; filed, July 21. Liabilities unsecured, 807l. ; estimated net assets, 650l. A list of creditors appeared in the *C. & D.* for July 15 (index folio 96).

LIMITED COMPANIES.

New Companies Registered.

The letters P.C. mean Private Company within the meaning of the Companies Act, 1907, and R.O., Registered Office.

Rozemyline, Ltd. (P.C.).—Capital 100l. Objects : To carry on the business of manufacturers of "Rozemyline," manufacturing and wholesale chemists, retail drug-store keepers, etc. The first directors are E. J. Lake and H. E. Riley. R.O., 59 Lichfield Road, Aston, Birmingham.

Macaura Pulsocon, Ltd.—Capital 80,000l.; in 1l. shares. Objects : To carry on the business indicated by the title, and to adopt an agreement with G. J. Macaura. The first directors are G. J. Macaura and W. F. Lay. R.O., Pembroke House, 133 Oxford Street, W.

Pearlah, Ltd. (P.C.).—Capital 8,000l. Objects : To take over from H. G. Newton, of Kingsway, W.C., a formula for a toilet-cream known as "Pearlah." The first directors are H. G. Newton, J. C. Schroeder, and H. T. Smith. R.O., Kingsway House, Kingsway, W.C.

Table Waters, Ltd. (P.C.).—Capital 1,500l. Objects : To carry on the business of manufacturers of and dealers in aërated-waters, and to adopt an agreement with C. W. Wallace Bruce & Co., Ltd. The first directors are T. J. Gregson and W. A. Dewick. Qualification, fifty shares.

Petol, Ltd. (P.C.).—Capital 25,500l. Objects : To take over the business carried on under the style of "Petol," and to carry on the business of manufacturers of and dealers in by-products of peat, patent medicines, disinfectant manufacturers, etc. The first subscribers are B. Boothby, 20 Sydney House, Bedford Park, W., and A. E. Hill, 55 Chatsworth Gardens, Acton, W.

Company News.

Spratt's Patent, Ltd.—The directors have declared an interim dividend on the ordinary shares of 4s. each, less income-tax.

Hanley Chemical Manufacturing Co., Ltd.—To be voluntarily wound-up. Liquidator, Mr. F. H. Pope, Bank Chambers, High Street, Tunstall.

Park Chemical Co., Ltd.—At an extraordinary general meeting held at 14 Wood Street, Bolton, on July 11, it was decided to wind-up the company voluntarily. The liquidator is Mr. James Carter, 14 Wood Street, Bolton.

Apollinaris and Johannis, Ltd.—The annual meeting was held at the Holborn Restaurant on July 21, the Earl of Bessborough presiding. In moving the adoption of the report and accounts (see *C. & D.*, July 15, p. 96), he referred to the high price of bottles during the past few years, which meant a difference of 35,000*l*. per annum to the company. They had now overcome the cost of bottles by erecting a factory of their own at Rheinahr, which factory would in course of time be able to make all the bottles they required. Their sales had improved. In 1906 they sold 30,000,000 bottles; in 1907, 31,000,000; in 1908, 30,000,000; in 1909, 28,000,000; in 1910, 29,500,000; and for the past year they had sold over 31,500,000 bottles, a very satisfactory improvement. Mr. Julius C. Prince, vice-chairman and managing director, in seconding the resolution, gave an interesting account of the bottle-factory and the success it had met with. The report, declaring a balance dividend of 3 per cent. on the ordinary shares (making 5 per cent. for the year), was unanimously adopted.

Charges or Mortgages.

Under the Companies (Consolidation) Act, 1908, Section 93, the mortgages or charges therein specified are (except in Scotland) void against the liquidator and any creditor of the company unless filed with the Registrar in accordance with the conditions laid down in the Act.

Full statutory particulars of the following have been filed at Somerset House, London, W.C.

Mace & Haldane, Ltd.—Particulars of 2,400*l*. debentures created July 3, 1911, and now issued. Property charged: The company's undertaking and property, present and future, including uncalled capital. No trustees.

Pinchin, Johnson & Co., Ltd.—Transfer of mortgage and further mortgage dated June 21, 1911, to secure 15,000*l*. (including a sum of 5,000*l*. secured by a mortgage dated December 2, 1909, in favour of H. J. and G. Smith, already registered) charged on land, factory, premises, etc., formerly known as "Hall's Wharf," but now as "Pinchin's Wharf," Plaistow Marsh, West Ham. Holders: National Provident Institution.

Tidman, Ltd.—Issue on June 28 of 200*l*. debentures, part of a series of which particulars have already been filed.

BIRTHS.

Blackbourn.—At 169 Eastbank Street, Southport, on July 24, the wife of William Blackbourn, dispensing chemist, of a daughter.

Boehm.—On July 24, 1911, at Sudbury House, Harrow-on-the-Hill, Middlesex, the wife of Frederick Boehm (F. Boehm, Ltd.), of a son.

MARRIAGE.

McNaught—Hastings.—At Ballymacarrett Presbyterian Church, by the Rev. C. M. Young, B.A., on July 11, Andrew McNaught, Ph.C., Belfast, to Flora, second daughter of the late David Hastings, Belfast.

DEATHS.

Boyce.—At 2 Sussex Villas, Clarence Road, Windsor, Mr. John Pierce Boyce, Ph.C., aged eighty-three. Mr. Boyce passed the Major in 1853.

Fell.—At 82 St. Stephen's Road, Preston, on July 20, Alice, widow of Mr. W. E. Fell, chemist and druggist, Preston, aged eighty-three.

Little.—Recently, at Rose Villa, Wigton Road, Carlisle, Mr. Robert Little, chemist and druggist, aged sixty-seven. Mr. Little passed the Modified examination in 1874, and was in business at Carlisle for over thirty-five years.

Spies.—On July 24, Mr. Hermann Spies, of Hurstmonceux, Wimbledon Hill, and of Messrs. Spies Bros. & Co., 102 Fenchurch Street, London, E.C., aged sixty-one.

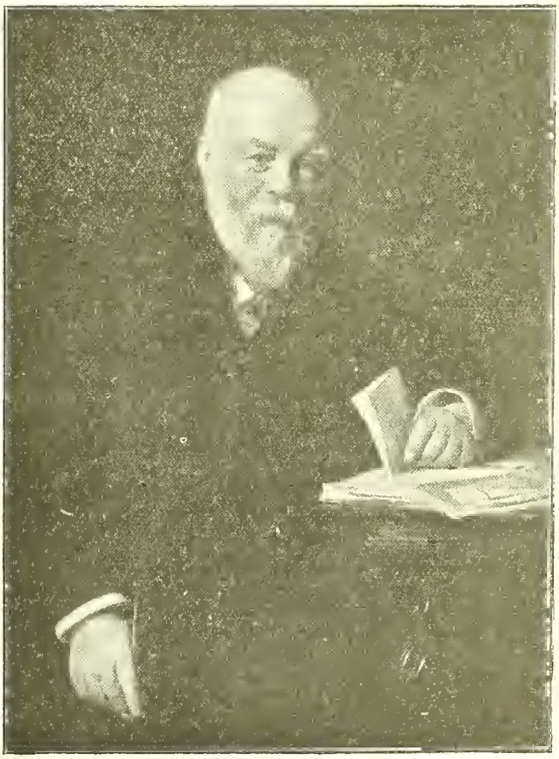
PERSONALITIES.

Notes for this section sent to the Editor should be authenticated, and must not be in the nature of advertisements.

Mr. Ernest Ralling, of Johannesburg, Transvaal, is paying a visit to England. Communications for him may be addressed to 2 St. Peter's Street, St. Albans, Herts.

Mr. A. E. Holden, of Messrs. Fairchild Bros. & Foster, London, sailed by the s.s. *Empress of Britain* for Montreal on Friday, July 28. He will be in Canada on vacation in August, and afterwards will visit his firm's headquarters in New York, returning here at the end of September.

Sir Thomas Barclay, J.P., Chairman of Messrs. Southall Bros. & Barclay, Ltd., Birmingham, is being presented with his portrait by his fellow-directors. They selected as the artist Mr. A. P. Nowell, who painted the remarkably successful portrait of Mr. Walter Hills, which was presented to the Pharmaceutical Society on his retirement. Mr. Nowell has been equally successful with Sir Thomas Barclay. We had the opportunity of inspecting the painting one morning recently at the artist's studio, Edwarde's Cottage, 1 St. Mary Abbot's Place, Kensington, W., and the accompanying engraving from a photograph by the Autotype Fine Art Co. is as faithful a reproduction of it as is possible in monochrome. Anyone who has called on Sir Thomas Barclay at his office in Birmingham will recognise the attitude—just how he turns from his desk when speaking. Mr. Nowell has also painted a companion picture of Lady Barclay, which is equally happy as a portrait, while it shows the artist's resourcefulness in arrangement and colouring.



Sir Thomas Barclay, J.P.

Pharmacopoeial Ointments.

Dr. R. B. Wild, Professor of Materia Medica at Manchester University, has reported to the Therapeutic Committee of the British Medical Association "On the Official Ointments, with Special Reference to the Substances used as Bases," the paper being printed in the "British Medical Journal." The forty-four British Pharmacopœia ointments are classified by Dr. Wild as: (1) Protective; (2) emollient; (3) absorbent; (4) sedative and astringent; (5) stimulant; (6) irritant; and (7) parasiticidal; the properties of the first three classes depending on the base used, and of the last four on the medicament incorporated therewith. The melting-points of the various bases, as determined by experiment and as given in the British Pharmacopœia, are tabulated. Soft paraffin provides the most notable variation in regard to melting-point, and it is stated that there would be a decided gain in uniformity of product if the melting-point of soft paraffin were brought within narrower limits, or, failing that, if two varieties were allowed melting at 31°—34° and 37°—40°. Dr. Wild remarks that apparently those substances which soften gradually at temperatures considerably below their melting-point are more useful as bases than those which retain their solidity until the melting-point is approached and then liquefy rapidly. Experiments were made with different bases, and where suitable the ointments were used clinically at the Manchester and Salford Hospital for Skin Diseases. The relative protective power of the ointment-bases, and also of the absorption of ointments by the skin, were determined by rubbing weighed quantities of the ointment (usually 10 grains) into a definite area of skin (usually 20 sq. in.) for a fixed time, after which the ointment is scraped off the surface of the skin and off the rubbing finger, and re-weighed. The usually accepted views are confirmed, as is apparent in the following statements:

> Soft paraffin and paraffin-ointment appear to be hardly absorbed at all, but remain on the skin as a protective layer for a considerable period. Lard and olive oil absorbed to a considerable extent, about 15 per cent. after two minutes' rubbing; hydrous wool-fat, 20 per cent., provided the proper amount of water is present; old samples partially dried are less absorbed. Owing to its powerful adhesive properties no reliable result was obtained from anhydrous wool-fat. The greatest loss of weight occurred from a mixture of equal parts of glycerin of starch and hydrous wool-fat, which is a useful base when a comparatively non-greasy emollient is required.

Some useful notes are appended regarding the properties of the classes of ointments. Lassar's paste, prepared by mixing starch 1 part, zinc 1 part, and soft paraffin 2 parts, is referred to as a good protective base which might usefully be added to the Pharmacopœia for preparing ointments of boric acid, salicylic acid, glycerin of subacetate of lead, and others intended to act only on the surface of the epidermis. Another good protective base of a softer character is obtained by mixing hydrous wool-fat 1 part with soft paraffin 3 parts: it is more emollient than soft paraffin alone, but sufficiently protective and does not run so much. Spermaceti ointment, the only firm emollient base, is somewhat expensive, and it is suggested that a simple ointment somewhat softer than that of the B.P. 1885 would be a valuable addition. For a comparatively non-greasy emollient equal parts of hydrous wool-fat and glycerin of starch are a useful base. Some suggestions are made for the revision of the official ointments, which are shortly as follows:

Ammoniated-mercury Ointment.—Strength unnecessarily high—5 per cent. better. Lard more efficacious base.

Red Mercuric-oxide Ointment.—Paraffin basis inferior to lard when used for treatment of pediculi.

Mercurous-chloride Ointment.—Stronger ointment required; 1 in 5 or 1 in 3 would be better strength.

Mercuric-oleate Ointment.—Less active than the B.P. 1885, which is still prescribed. The ointment of the B.P. 1885 did not keep well, but 20 per cent. does, and can be diluted as required.

Tar Ointment might be made softer, as it is difficult to combine with other substances.

Lead-subacetate Ointment.—The glycerin a disadvantage; an ointment of liq. plumbi subacet. fort. with wool-fat and soft-paraffin base more useful.

Zinc-oleate Ointment.—Unsatisfactory.

Capsicum Ointment.—Consistence needs improving.

Belladonna Ointment.—Too strong.

Rose-water Ointment.—Needs improving.

Paraffin Ointment.—A better protective base needed.

As a useful addition Dr. Wild suggests resorcin ointment with a protective base. Conium, eucalyptus, lead acetate, lead carbonate, and potassium iodide are little used and might be deleted. Dr. Wild acknowledges the help of Mr. James Grier, M.Sc., Manchester University, and Mr. F. Hanna, dispenser at the Manchester and Salford Skin Hospital.

Dutch Tariff on Medicines.

A petition has been presented to the Second Chamber of the States-General on behalf of the Managing Committee of the Netherlands Association for Promoting Pharmacy, objecting to the tariff on medicines submitted to the Chamber by the Minister of Finance. It is proposed to levy a duty of 250 guilders per 100 kilos. (10*l*. 8*s*. 4*d*. per cwt.) on "medicines packed for immediate use or for retail sale." The Association asks for a better definition of medicine. The "Memorandum of Explanation" describes as medicines only such preparations as are supplied to the public by a chemist according to the prescription of a doctor. This description, however, can in no way be deemed complete. In recent times the use of all kinds of physic without prescription by a doctor or chemist has greatly increased, and these are "medicines." The Association also objects to the method of levying import-duty according to the weight, which is unjust as regards packed medicines, and suggests that the duty should be fixed according to the price paid by the public on retail sale, as is the case with the stamp-duty introduced in England. This is explained, and the memorial submits the following table to show how unequal would be a duty according to weight:

Medicine	Weight in Grams	Import Duty	Retail Price	Percentage of duty on the retail price
		fl.	fl.	about
Marienbad Reduction-pills	21	0.05	2.50	2%
Purgen Tablets	12	0.03	0.75	4%
Swiss Pills	13	0.03	0.70	4%
Pastilles Géraudel	55	0.14	0.75	18%
Cascarine Leprince	58	0.15	1.50	10%
Scott's Emulsion	990	2.47	2.25	110%
Quina Laroche	1,020	2.55	2.50	102%
Grape Ferment Jacquemin	2,050	5.12	5.00	102%
Haematogen Hommel ...	740	1.85	1.70	108%
Athenstaedt's Iron Tincture	1,090	2.72	1.50	180%
Eno's Fruit Salt	580	1.45	1.75	83%
Keating's Cough Lozenges...	100	0.25	0.70	36%

1 guilder or florin (fl.) = 1*s*. 8*d*.

If a duty on foreign medicines is deemed expedient, the memorial asks the Chamber to fix such a duty exclusively in proportion to the retail price charged to the public.

A Proposed Camphor Trust.—The business of camphor-refiners and celluloid-makers, especially in America, has been seriously affected by the rise in price of raw camphor, and during the past year Mr. Anderson, a director of a large American camphor company, and later, Mr. Crane, of the Boston Celluloid Co., have paid visits to Tokio and Formosa in this connection. The former is stated to have concluded that the only remedy is the formation of a "camphor trust," to include Japanese, American, and, if possible, European refiners. Consul Barendrecht, of Kobe, states in a recent issue of "Handelsberichte" that Japanese traders, as a condition of their joining the trust, are stipulating that 1,200,000 lb. of camphor will be required yearly by the trust.

Summer Supplements

Notes on Business Insets in this Issue

SINCE the early days of THE CHEMIST AND DRUGGIST, advertising by means of Insets has been a periodic feature, and since this journal became a weekly such issues as the present one have been specially reserved for the Insets. The purpose is for manufacturers and others to place in the hands of the unique *clientele* of buyers, which THE CHEMIST AND DRUGGIST provides, circulars and price-lists designed and produced by themselves in a manner which enables them to illustrate their goods more effectively than can be done by printers' black ink. Many examples in this Summer Issue prove how effectively this can be done. We have rarely, indeed, had the pleasure of receiving for insertion so many artistic Insets, revealing the progress of the printing art, and proving the enterprise of the business-houses who insert them.

It is also to be noted that the insertion of these circulars and price-lists in THE CHEMIST AND DRUGGIST has the advantage of presenting them to our readers in a more permanent form than they would have were they received separately. This Summer Issue is intended to be used by thousands at home and abroad to replenish their stocks and, especially, to anticipate the demands, *e.g.*, of next Christmas's trade or any other season's business. For THE CHEMIST AND DRUGGIST circulates so universally in the world that its readers at any one time are trading in all the seasons of the year. Our circulation in the Colonies and foreign countries is so large as to provide to our advertisers (independent of our home circulation) a business asset superior to the whole that is offered by any other journal of pharmacy and the drug-trade. This is so well proven that a few of the Insets included in this issue are sent in the Colonial and Foreign copies only.

We believe that business-brains are increasing in pharmacy. Men have learnt that professional skill and knowledge do not fill the till, needful though they are. The profession is a business which, like all others, depends for success in buying goods and selling them as quickly as possible at the best obtainable profit. Pharmacy business no longer depends upon the sale of drugs which Galen and other great men of the past made popular; some of the drugs are still with us and are wanted, but returns can only be kept up and increased by buying and selling new things. The man who is first in the market with the latter has the advantage. The Summer Issue of THE CHEMIST AND DRUGGIST will help such men, and in going through it from cover to cover they will find the Insets grouped in a helpful manner. The notes which we give here in regard to them are arranged alphabetically, the folios indicating where they are placed. We append a notice by the publisher in regard to the next occasion on which Insets will be received for insertion.

Allen & Hanburys, Ltd., manufacturing, pharmaceutical, and analytical chemists, wholesale and export druggists, London, insert an illustrated price-list of (1) "A. & H." galenicals, (2) packed drugs, (3) toilet-preparations, and (4) toilet-soaps. The list contains eight full pages of coloured plates, executed by the three-block process from autochrome photographs of the original articles. These are a triumph of pictorial reproduction, and demonstrate the high standard Messrs. Allen & Hanburys have carried their printing department. But the direct object of the inset is to show buyers for themselves the actual appearance of the packages, etc., in which Messrs. Allen & Hanburys put up specialities for sale. The pictures are practically as good as samples, and in every case quotations are given with specifications of the articles. (Inserted loose.)

Armour & Co., Ltd., Atlantic House, Holborn Viaduct, London, E.C., insert a circular in regard to the tenth edition of the "Armour" Formulary. This exceedingly popular book of recipes for counter-specialities provides chemists with the means for adding materially to their returns by means of preparations in every-day demand. The inset contains examples of the labels and showcards which Messrs. Armour & Co. supply retailers with, and in order that everyone may have an opportunity of getting a copy of the Formulary free, part of the inset is a post-card, which chemists have merely to fill in with their name and address and post to the firm. Chemists in the Colonies and abroad are reminded that a penny stamp will be required in their case. (Pp. 32 and 33.)

Baiss Bros. & Stevenson, Ltd., manufacturing chemists and wholesale druggists, 174, 175 and 176 Grange Road, Bermondsey, London, have an inset printed in red and green on pink paper. Therein are told the merits of the company's well-known cod-liver-oil emulsion (the present being the time for arranging winter contracts), Krysyl (a phenol disinfectant), Pinesyl (a non-poisonous disinfectant), and Pinesyl soap. These are the specialities of the house, but on the front page are noted other druggists' goods and chemicals, for the supply of which the company are particularly well placed. (Pp. 32 and 33.)

Alfred Bishop, Ltd., originators of Bishop's granular effervescent preparations, 48 Spelman Street, London, E., give in their circular the reasons why Bishop's Natural Fruit Saline will bring trade. This saline does not contain sugar, and although sold at a moderate price is of the best quality. An artistic reproduction in colours is given of the front of one of the cartons in which the bottles of saline are packed. (Colonial and Foreign copies only.)

The British Drug Houses Ltd., wholesale druggists and chemical and pharmaceutical manufacturers, Graham Street, London, N., present a brochure comprising the article on their fine establishment which was printed in our last Winter Issue, most of the pictures being given on an enlarged scale. To this are added several lists of "B. D. H." products, manufactured at "The Home of Tetradome," such as P.P.P. chemicals, chemical and pharmaceutical preparations, pharmaceutical specialities, and essential oils. The following postscript is added:

> Evolution is never complete. It does not suffice to *be* up to date; it is necessary to *keep* up to date. During the weeks that have elapsed since the Editor of THE CHEMIST AND DRUGGIST paid his series of visits to "The Home of Tetradome" many notable alterations and additions have been in progress. New steelwork, shafting, and machinery have appeared in the "G" factory, in order to cope with the extra work in the lozenge and allied departments. Additional engineering arrangements have been decided upon in the main galenical laboratory in order further to reduce working costs, while as this book goes forth to readers the south yard is in the hands of contractors, who are erecting buildings for fresh manufacturing operations.

The brochure is inserted loose.

Brunner, Mond & Co., Ltd., alkali manufacturers, Northwich, devote their inset to a description of the mineral-water bicarbonate which is especially adapted for the production of carbonic-acid gas for aërated waters. The instructions for employing the bicarbonate are appended with a view to showing the simplicity of the process. Aërated-water makers will note especially the superior yield of gas and the absence of sediment, which are the objections to the employment of whiting for generating carbon dioxide. (Pp. 156 and 157.)

W. J. Bush & Co Ltd, soluble essence, oils, and perfume manufacturers, Ash Grove, Hackney, London, N.E., in a coloured circular which can be used as a showcard, set forth the latest additions to the series of Buisson Frères floral perfumes, described as "the best in the world." The attractive young lady with the bunch of roses in her hand is a reminder that the newest sachet is "Crushed Roses," and, like the other products of the firm, it is beautifully packed and good value for money. Prices for this and other popular perfumes are given. (Pp. 32 and 33.)

Butler & Tanner, The Selwood Printing Works, Frome, have a supplement which maintains the individuality which characterises the printing of this firm. Commercial printing, such as booklets, catalogues, price-lists, and advertising matter, is supplied in distinctive style by this firm, an important point when it is desired to attract the attention of the public. The firm invite applications for specimens and estimates, which may be obtained from the London office as well as from Frome. (Pp. 156 and 157.)

Arthur H. Cox & Co., Ltd., pill and tablet manufacturers, Brighton, have an inset devoted to counter-lines. First should be noted the smartly written remarks on the profits on compressed goods (printed on the last page); then the reader should study the special lines. These are samples of the large number of prettily packed medicaments which the company supply to chemists. Turning over the pages, we find particulars of the showcards and counter-cases supplied by the company, which do much to help sales. These are calculated to interest customers who see them in the window or on the counter. Besides tablets, packed pills and suppositories are also quoted for. (Inserted loose).

Eucryl Ltd., Hull, Eng., are the manufacturers of Eucryl tooth-powder. "Don't miss this inset," for inside it is a full explanation of how you can get threepence profit on every sixpenny tin of the tooth-powder. Use the order-form which is a part of the inset. (Pp. 32 and 33.)

Fickus, Courtenay & Co., Ltd., 36 Sackville Street, Piccadilly, London, W., the agents in England and Wales for No. 4 Eau de Cologne, have a supplement which bears upon one side a reproduction of the showcard sent out to chemists, and on the other side a facsimile of a bottle of this celebrated perfume. The No. 4 Eau de Cologne is sold at P.A.T.A. protected prices, and is in demand in most pharmacies. (Pp. 156 and 157.)

Wm. Gardner & Sons (Gloucester), Ltd., engineers, Gloucester, insert an illustrated circular dealing with their sifting and mixing machines, which are useful in the preparation of all kinds of medicinal and pharmaceutical powders, as well as tooth and toilet powders, and they also have machinery for preparing such heavy articles as self-raising flour. All these are fully described and illustrated in the inset, and particulars are given of grinding and other machinery for comminuting drugs and chemicals. Any reader who desires fuller information should write to the company for their No. 22 Catalogue. (Pp. 156 and 157.)

C. R. Harker, Stagg & Morgan, Ltd., wholesale druggists and manufacturing chemists, Mile End, London, E., insert a bird's-eye view of their factories and warehouses, to which the premises on Bell Wharf have been added. The nature of the change is more fully referred to elsewhere in this issue, but we may explain that the inset is from their own printing-press, and the view on it is larger than this one we give. (Pp. 156 and 157.)

C. J. Hewlett & Son, Ltd., manufacturing chemists, Charlotte Street and Curtain Road, London, E.C., devote their inset to packed goods for chemists. An abridged list is given of the principal items, and the reader will be attracted by the fine reproductions in colour of many of the packed medicines and toilet articles. The advantages of these illustrations are that it is easy to judge of the attractiveness of the various preparations, and chemists in distant parts of the Empire are placed in a position to note the attractive *tout ensemble* of Hewlett's goods. (Colonial and Foreign copies only.)

Ichthyol-Gesellschaft Cordes, Hermanni & Co., Hamburg, show in their circular the appearance and labels of original tins of ichthyol. To the ammonium sulpho preparation appertains the name ichthyol, the sodium preparation being designated ichthyolate, and we may recall the fact that the word "ichthyol" and its combinations are the property all over the world of this company. The few notes on the back of the inset will be found useful to dispensers as showing the methods of prescribing. (Pp. 156 and 157.)

McKesson & Robbins, manufacturing chemists, 91 Fulton Street, New York, U.S.A., give in their inset a selection of the formulæ for the "McK. and R." capsuled pills which they manufacture, and for which the London agents are Messrs. S. Maw, Son & Sons, 7 to 12 Aldersgate Street, E.C. The pills are gelatin-coated, and the ovoid shape facilitates the operation of swallowing them. The pill-list is interesting on account of the short notes which follow some of the formulæ, and it should be understood that these pills are merely a selection from several thousands. The back cover of the inset is devoted to Calox, the oxygen tooth-powder, which originates from this house. The dentifrice is sold on P.A.T.A. terms. The British depôt is with Messrs. G. B. Kent & Sons, Ltd., 75 Farringdon Road, London, E.C. (Pp. 64 and 65.)

Mikado Toilet-paper.—A sample of this toilet-paper is inserted in each copy of this issue to show the actual quality of this high-class sixpenny line. It is sold in packets and rolls, and is supplied to the trade by the leading wholesale houses—the names of several are given on the sheet—and from the list it will be seen that small as well as large buyers can get supplies. Sample packets may also be obtained from these wholesalers. (Pp. 64 and 65.)

Newball & Mason, Nottingham (proprietors of Mason's Extract of Herbs), invite our readers to send for "The Business Motor," a publication of the firm, intended specially for business-men. The inset contains also a pen-and-ink sketch of the premises where the extract of herbs is manufactured. The latest advertisement from a sketch by the late Tom Browne is given on the back page of the inset. (Pp. 64 and 65.)

A. & F. Pears, Ltd., Soapmakers by appointment to our King and Queen, 71 to 75 New Oxford Street, London, W.C., have a noticeable inset, which is specially attractive by reason of the magnificently illuminated front page. The reproductions of Royal arms and the design in colour are particularly appropriate in Coronation year. These and other emblematic features on the inset are designed with painstaking regard to accuracy, and executed with that remarkable finish which characterises all Messrs. Pears' art advertisements. Note, for example, the vellum appearance of the Royal page—a subtle effect of printing which gives the correct finish to the design, and makes the page worthy of a frame and window or counter display. Inside are given the company's wholesale terms, the highest discount being fixed for orders of not less than 5*l*. A testimonial to the purity of the soap, written by the late Professor John Attfield, is given on the fourth page with his portrait. (Pp. 32 and 33.)

Stevenson & Howell, Ltd., soluble-essence manufacturers and essential-oil distillers, Southwark Street, London, S.E., devote their inset to their "Perfect" soluble essence of lemons and "Red Ball" soluble essence of stone ginger-beer. The former conveys to aërated water the correct flavour of natural lemons, and the latter produces a cloudy ginger-beer by a simple method in place of the old complex brewing process. The matter on the back of the circular is a clever piece of advertising in pithy language. (Pp. 64 and 65.)

Suttley & Silverlock, Ltd., chemists' printers and stationers, Blackfriars Road, London, S.E., have a brilliant circular catering for printing and stationery for chemists and druggists. The company and its predecessors have been specialists in chemists' label-printing for over eighty years, and claim to understand the requirements of the trade in a manner which saves time and trouble to the chemist. (Pp. 64 and 65.)

The Thackeray Hotel and **The Kingsley Hotel**, two hostelries in the West Central district of London, are much patronised by chemists who visit town. The inset gives some particulars of these institutions, which will be of interest, especially to Colonial and Foreign visitors to London, who can rely upon being made comfortable at moderate rates—desiderata of the first order to all, especially those visiting London for the first time. (Colonial and Foreign copies only.)

Wilkes & Co., Ltd., printers, Friar Street, Southwark, London, S.E., appeal to those who have urgent printing to do. They are open day and night, have specialised in chemists' printing, and have in the support of many in the chemical and drug trades an endorsement of the manner in which they execute their work. (Pp. 32 and 33.)

Publisher's Notice.

The next occasion upon which circulars, price-lists, or other Insets will be received for insertion in The Chemist and Druggist will be the Winter Issue, to be published on January 27, 1912. We give this early notification so that business-houses may make inquiries or institute arrangements. All information requisite for the guidance of printers can be obtained on application to the Publisher of The Chemist and Druggist, 42 Cannon Street, London, E.C. He will also be pleased to give advice in regard to the designing and preparation of Insets.

POISONING FATALITIES.

Four suicidal deaths and one accidental death from poisoning have been reported since our issue of last week up to Wednesday night:

Opium-poisoning.—At an inquiry held at Lambeth into the death of Murray McAndrew (32), it was stated that deceased lips turned blue after sucking a cigarette, and he remarked, "It is laudanum, and no power on earth will save me." His words were not taken seriously, but he died in the hospital next morning from opium-poisoning. Suicide during temporary insanity was the jury's verdict.

Potassium Cyanide.—James Walsh (46) applied at the London Hospital for advice, but when asked to stay in the institution he declined to do so. He died shortly afterwards in the street from cyanide-poisoning. At the inquest the London Hospital house-surgeon stated that when he examined deceased he detected no signs of poisoning. The Deputy-Coroner remarked that that was rather an extraordinary story.

Prussic Acid.—At the inquest upon Thomas Machin (59), who committed suicide by taking prussic acid, the Sheffield Coroner (Mr. J. Kenyon Parker) made some caustic comments in regard to the sale of the poison by Mark Dalton Ellison, Victoria Street, Kilnhurst, near Sheffield. Ellison stated in his evidence that he was not a pharmaceutical or registered chemist, but described himself as an associate. He had supplied deceased with 2 drams of Scheele's prussic acid to poison a dog. Questioned by the Coroner, witness said nobody had introduced deceased nor was the sale entered in any book. He labelled the bottle "Dog-poison," but did not mark it "Prussic acid." The Coroner, expressing his personal view, said that the way the poison was sold by Mr. Ellison was very rash and careless. He had committed a number of offences against the law, for which proceedings could be taken against him. There seemed to have been almost every possible irregularity at the sale of the poison. The jury found that deceased committed suicide while insane. They preferred to say nothing relative to the sale of the poison, leaving that to the Coroner and the authorities.

Strychnine.—At Prehen, Londonderry, Alexander Morrison (70) drank strychnine and died a few minutes afterwards.

Carbolic acid caused the accidental death of Robert Jenkins (33), haulier, at West Bromwich.

The Soy-bean in India.—The considerable amount of interest shown in the soy-bean has led Mr. David Hooper to prepare a pamphlet dealing with the product in India. Mr. Hooper gives ("Agricultural Ledger," 1911, No. 3) details of the experimental cultivation in the various provinces, and although these have been successful, India does not seem to have taken kindly to the pulse as a food, as its cultivation has been abandoned, although in some instances fair results have been obtained. There has, however, been a revival of interest recently, and the Agricultural Department has this year sent to the Reporter on Economic Products samples of the black variety of soy-beans from forty villages of the United Provinces.

Fairchild Scholarship and Prizes.

The seventh annual Fairchild Scholarship and Prizes Examination was held on Wednesday, June 28, at the five centres, under the supervision of the following gentlemen: Cardiff, Mr. Albert Hagon; Dublin, Mr. W. F. Wells; Edinburgh, Mr. Peter Boa; London, Mr. S. Lamplough Scott; Manchester, Mr. James Grier, M.Sc. The papers were assessed by Mr. Grier (Practical Pharmacy and Prescription-reading), Mr. W. A. Whatmough, B.Sc. (Chemistry), Mr. A. J. Phillips (Materia Medica), and Mr. S. Lamplough Scott (Business Knowledge). The following are the results:

Mr. Humphrey Noel Felix Cook, Newtown, Great Yarmouth, wins the Scholarship with 378 marks out of a possible 500.

Mr. William Cooper, Bath, the runner-up, wins the England Prize.

Mr. William Henry Wallace, Rathgar, Dublin, wins the Ireland Prize.

Mr. David Grieve, Leith, wins the Scotland Prize.

Mr. Arthur C. Sumption, Blackwood, Mon., wins the Wales Prize.

There were 61 candidates, 55 of whom sat for the examination (this being a record both for entries and the number of candidates to present themselves): England, 39; Ireland, 2; Scotland, 10; Wales, 4. These figures prove that the interest in the scholarship is increasing. On the individual subjects, the candidates representing England, Ireland, Scotland, and Wales made the following percentages:

	Mat. Med.	Bus. Know.	Chem.	Prac. Phar.	Total Average.
England ...	39.23	39.15	67.21	54.3	49.99
Ireland ...	20.00	33.5	55.66	55.00	41.04
Scotland ...	45.5	44.1	66.60	56.13	53.08
Wales ...	33.75	29.5	72.5	62.15	49.47

Mr. Humphrey Noel Felix Cook, Newtown, Great Yarmouth, registered as a student of pharmacy at Great Yarmouth and apprenticed to Mr. A. R. Davies, of Leigh, Lancs. Mr. Cook is now in the employ of Mr. F. E. Whitfield, 65 Regent Road, Great Yarmouth.

Mr. William Cooper, Bath, Somerset, registered as a student of pharmacy at Bath and apprenticed to Mr. A. H. Cooper, Bath, and still in his employ.

Mr. William Henry Wallace, Rathgar, Dublin, registered as a student of pharmacy at Greystones, co. Wicklow, and apprenticed to Mr. C. B. Vance, of the same town; later he entered the employ of Dr. John Evans, of Dublin. Mr. Wallace is now with Mr. John Smith, Rathgar, Dublin.

Mr. David Grieve registered as a student of pharmacy at Leith and apprenticed to Mr. G. Philip, of Dunfermline; he then entered the employ of Messrs. Raimes, Clark & Co., Ltd. Mr. Grieve is now in the employ of Messrs. T. F. Macfarlan, Abbeyhill Chemical-works, Edinburgh.

Mr. Arthur C. Sumption, Blackwood, Mon., registered as a student of pharmacy at Blackwood, and apprenticed to Mr. W. C. Sumption, of the same town; later he entered the employ of Mr. Harry Cook, West Ealing. Mr. Sumption is now in the employ of Mr. E. D. Foster, Bishopsgate, London, E.C.

Mr. Holden (Secretary to the Trustees of the Scholarship) informs us that he has received a letter from Mr. Harry Brindle, the 1910 Fairchild scholar, informing him that he has passed the Major examination. He adds:

> "I have heard that the number of candidates for the Scholarship is greater this year than last; I hope it is true. The Scholarship deserves to be successful. What little distinction I have achieved is largely due to my having won the Fairchild Scholarship. Not only did it help me financially, but it gave me great encouragement to pursue my studies further than I might otherwise have done, and its effect is not by any means spent yet. If it does as much for all the winners as it has done for me, many of the past and future scholars must look back upon it as being the first step in their successful careers, both as students and business-men."

Liquorice-root to the extent of 951 tons and 55 tons of extract were exported from Seville in 1910. Six tons of extract came to Great Britain, but none of the root. Batoum exported 13,533 tons of root in 1910 and 16,407 tons in 1909.

INFORMATION DEPARTMENT

For Supplying Names and Addresses of Manufacturers of or Agents for Goods.

Addresses { Postal: C. & D. Information Department, 42 Cannon Street, London. E.C.
Telephone: Bank 852 (two lines). Telegraphic: Chemicus London.

INFORMATION WANTED.

We would be obliged if any reader would inform us by postcard or telephone who are the makers or agents of the articles mentioned in the following inquiries received since our last issue:

113/51. "Arabian Balm."
113/37. "Ponteia" musk.
103/26. "Electroline" salve.
113/48. "Koh-i-noor" feeders.
113/50. "Salen": what is it?
113/49. "Lactos" sugar of milk.
108/9. Darsy's (or D'Arcy's) soaps.
106/26. "Ivoirine" small-tooth combs.
109/10. "Carrusticode": an insecticide.
113/3. "Magnum" brand aerated waters.
103/29. Perfume "Special 68" (British make).
111/28. American Ferment Co., of Jersey City, U.S.A.: agents.
103/51. Address of "Rashleigh, Cox & Co., export agents."
112/49. Weaver's compound I.R. hot-water bottle and douche.
108/44. White "Albit" (used in the manufacture of matches).

INFORMATION SUPPLIED.

During the past week we have answered inquiries as to where the following articles can be obtained, and in many cases we have given the actual makers. The information will be repeated to any other inquirers who send to this Department a stamped and addressed envelope for the purpose.

Reducine (113/42).
Urodonal (109/25).
Albargine (113/16).
Eucrasyne (112/48).
"Therapion" (112/38).
Turkey-red oil (108/35).
Feeding-bottles (112/28).
Ehrlich's "606" (113/1).
Glycerol Papoid (111/52).
Imperial hair-dye (108/4).
Dentistry tuition (109/46).
Quebracho extract (109/9).
"Fleet" duplicator (109/52).
Mackey's Kresyline (111/52).
Desvage's corn-cure (110/11).
"Secto" insecticide (110/27).
Bickmore's gall cure (111/20).
Brodie's preparations (108/4).
Fell's reducing-tablets (106/20).
Oaten's local anæsthetic (108/2).
Ingluvin (makers and agents) (110/68).
Ingram's teats (Dutch inquiry) (110/62).
Ammonium phosphate commercial (113/31).
Whitla's "Materia Medica": publishers (107/4).
Barrett's "Dental Surgery": publishers (107/5).

APPRECIATIONS.

From a Chemist and Optician:

"I have filled my requirements, and have pleasure in thanking you for your promptness and courtesy in the matter." (33/16.)

From a Country Chemist:

"Many thanks for the trouble you have taken in supplying information *re* imported medicines. Through your agency I have been suited." (36/61.)

From a Home County Pharmacist:

"Many thanks for the information so promptly sent. I have written to the firm named, and have mentioned your journal as being the source of my information. I always say if there is anything one wants to know: 'ask the *C. & D.*'" (38/59.)

From a Swiss Apotheker:

"Many thanks for the trouble you have taken in getting us the addresses for soda-fountain syrups. We have written to the firms, and trust that we shall be able to do business with them. If at any time we can help you with any information regarding Switzerland we are yours to command." (41/6.)

From a Parisian Merchant and Exporter:

"J'ai bien reçu votre estimée du 29 courant et vous remercie sincèrement des renseignements que vous me donnez. Je vais écrire aux quatre maisons en signalant que je dois leur nom au Chemist and Druggist. Veuillez agréer, Messieurs, mes salutations empressées."

TRADE-MARKS.

Objections to the registration of any of the undermentioned applications must be stated on Form T.M. No. 7 (obtainable at Money Order Offices for £1) and lodged with Mr. Temple Franks, Comptroller-General, Patents Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned.

The figures in parentheses refer to the classes in which the marks are desired.

(From the "Trade-marks Journal," July 12, 1911.)

"Irocose"; for a tonic (3). By Bayer Co., Ltd., 20 Booth Street, Manchester. 333,388.

"Oinfa"; for medicinal chemicals (3). By P. D. Richards, 5 Church Road, Cadoxton, Barry. 333,486.

"Vitafer" and label design of horseman carrying lance and shield inscribed "Vitafer"; for a medicated tonic-food (3). By Southall Bros. & Barclay, Ltd., Birmingham. 333,647.

"Embroint"; for an ointment (3). By Mary Pryer, 23 Kelmscott Road, Wandsworth Common, London, S.W. 334,079.

"Herrmannol" and label design; for a rheumatism cure (3). By A. Herrmann, senr., Augsburgerstrasse, 43, Berlin, W. 333,784.

"Valdo"; for sanitary towels (11). By A. S. Cartwright, Ltd., 75, 76, and 77 Ford Street, Hockley, Birmingham. 333,669.

The Cancer Bush (*Sutherlandia frutescens*) is described in the May issue of "The Probe." The plant is often used among natives and Dutch farmers throughout South Africa, and has a great reputation as a cure for cancer. An infusion of a handful of the tops of the plant in a quart of water is the usual method, and the powdered herb is also mixed with lard or fat to make an ointment for ulcers. The leaves when chewed have a bitter taste, and the dried herb powdered produces slight local irritation in the mouth. The plant appears to act as a stomachic and intestinal tonic.

OBSERVATIONS & REFLECTIONS.

By Xrayser II.

A "Minor" Pass List

of over fifty per cent. is surely something of a phenomenon. I wonder where the explanation is to be found! Perhaps in the hot weather having made the examiners less strenuous in their efforts to plumb the depth of the ignorance of the candidates, or perhaps in the students having at last realised that it pays to be prepared for the examination. Whichever explanation is accepted this at least is clear, that if the candidates maintain the improved form now being shown the bottom will be knocked out of the demand for a compulsory curriculum. For the chief argument in favour of compulsion has always been one of sympathy with the misguided victims of the voluntary system. The curriculum was in fact a scheme ostensibly devised in the interests of those half-baked students who with mistaken zeal are anxious to "have a shot" at the examination before they are ready for it. No thought of profit to the Society ever entered the Council's imaginations. How could it when the extension of the school would mean a still greater drain on the Society, and when member after member of the Council made the assurance that the examination would cost no more!

The Dearth of Qualified Men,

to which you refer, is being more and more acutely felt by retail pharmacists, and I do not think that the addition of 140 names to the register will relieve the difficulty to an appreciable extent. If anyone takes the trouble to count the number of qualified assistants that are wanted, and the number of those advertising for situations, he will find that there are often three places for two men. This deficiency has been foreseen for some years, and you have often pointed out that it was bound to come. It is the natural result of the screwing up some years ago of the "preliminary" standard by the Council of the Society, a process that inevitably tended to warn apprentices off. In this it has been singularly successful, for the numbers now coming into the business who possess the necessary Preliminary certificates are insufficient to keep the register at its present standard, much less to keep pace with the natural increase demanded by an increasing population. To which cheerful condition of affairs must be added another result, that coincidentally with a falling register of qualified men there is a rapidly growing number of the unqualified, a prospect that even the Council might think it worth while to pay some attention to.

Tasteless Cascara Preparations

ought to take a new lease of life if Mr. Cowley's suggestion as to the cause of the activity of the drug turns out to be correct. Mr. Cowley says that it is "commonly conceded" that cascara sagrada contains glucosides, but I am not aware that there is any general agreement on this point. If I am not mistaken, Jowett went into the matter very carefully some years ago, and he concluded that there are no glucosides in the bark. If there has been recent work controverting Jowett's conclusion I have not seen it, and I would be glad if Mr. Cowley would let us know the authority for his statement. Granting, however, that he is right as to the glucosides, his theory explaining why one kind of bark is more active than another may be correct, and his ingenious method of hastening the hydrolysis of the glucosides by artificial means will no doubt be tried by many experimenters. Might I suggest that sodium hydroxide would be a more suitable alkali than ammonia with which to neutralise the sulphuric acid? The sodium sulphate produced in the reaction would have some therapeutical effect, and in this way aid the laxative action of the cascara sagrada, while a minute trace of free alkali would do no harm, but would in fact be useful in rendering soluble and retaining in solution both the saccharin and the glycyrrhizin, and also be free from the ammonia odour which would be present were that alkali in slight excess.

Should Doctors Dispense?

asks a contributor to the "Daily News," and he answers the question with an emphatic "No." The reasons given for the answer are not exhaustive, but they will serve towards the formation of a healthy public opinion on the subject, and the italics (which are not mine) in the sentence, "The bottle of medicine, *supplied by the doctor*, probably is responsible for more inefficient doctor-work than anything else at all," point a moral to which the attention of dispensing doctors should be called. There can be no doubt that the abuse of counter-prescribing, to which they are never weary of directing *our* attention, is largely due to their practice of supplying every patient with a bottle of physic, whether he requires it or not, simply by way of giving him something tangible in exchange for a fee. This begets in the public mind an exaggerated notion of the efficacy of a "dose"; and since, as the "Daily News" writer pertinently says, the chemist has a much more imposing array of bottles containing possible doses than the doctor usually shows, the inference that he is likely to be at least equally

Effective in his Treatment

of the symptoms from which relief is sought can scarcely fail to be drawn, especially when experience has proved that the chemist dispenses his wares in a much more attractive manner than the doctor, and is in fact usually more successful in the war against symptoms. This is an aspect of the question which medical men appear to have overlooked. So long as they continue to be vendors of medicine they invite competition from pharmacists, who are by profession dealers in medicines, and who know a good deal more about them than they do. Time was when medical men themselves were little more than vendors of medicine, and they still seem reluctant to emerge entirely from the hole of the pit whence they were digged. The whole trend of medical science to-day is against their present practice; more clearly every day is it seen that their true work lies in other directions, in research, in sanitation, in diagnosis, in general treatment and prevention of disease, and that the supply of medicine, when medicine is needed, is a special function best discharged by those who have been specially trained for it. But greed—sheer greed—blinds too many doctors to this truth. They hunger for the flesh-pots of Egypt while professing to be in search of the land which Science promises, but which she will hardly yield to those who seek it so half-heartedly.

"Sal Indicum"

as a name for sugar has been questioned by Mr. David Hooper (*C. & D.*, July 8, index folio 68), though I must confess that I do not understand why. That sugar is not really a salt scarcely needs saying, but the connotation of the word "salt" has varied considerably at different times, and it might reasonably have been supposed that I should not have made the statement I did without sufficient warrant. It is true that none of the obsolete senses of the word which are noted in the Oxford English Dictionary covers this particular use of it, nor is any instance of such use given in the illustrative quotations; but Alleyne nevertheless says that Paulus Ægineta (who is supposed to have written in the seventh century) calls sugar "Indian Salt, indurated by the heat of the sun," and Lemery attributes the phrase *sal Indicum*, as a name for sugar, to Pliny, saying moreover, under *Sal Gemmeum*, "On substitue dans les compositions le Sel Gemme au Sel Indien, appelé en Latin *Sal Indicum*, que quelques-uns croyant être une espèce de sel minéral, & les autres le Sucre." As to the meaning there can be no question; Gerard says of the sugar-cane, "The Latines have called this plant *Arundo Saccharina*, with this additament, *Indica*, because it was first knowne or brought from India."

"SANITAS POWDER"

v.

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Editorial Articles.

The Latest News.

THIS Section of THE CHEMIST AND DRUGGIST closed for press on Wednesday afternoon, but it contains a report of the whole of the proceedings of the British Pharmaceutical Conference up to then. Later news is given in the Coloured Supplement. This afternoon Captain Craig has introduced into the House of Commons a Bill to amend the Pharmacy Acts (Ireland). This extends to the Irish retail drug-trade, the provisions of Section 3 of the Poisons and Pharmacy Act, 1908, for the purpose of regulating company trading in Ireland. It also provides for apprentices and assistants to companies being admitted to the Pharmaceutical Society's Examinations. The provisions of the Bill are given in this issue, which, we trust, our readers will find to be up to date in news, as well as instructive and interesting in other respects.

British Pharmaceutical Conference.

It is a new experience for this body to be presided over by an Irishman, and Mr. W. F. Wells acquitted himself excellently this week as President of the forty-eighth meeting of the Conference held at Portsmouth. His presidential address was on a subject that is timely—namely, the lack of

State Recognition of Pharmacists

in the laws of the United Kingdom. Those who have had anything to do with the efforts to secure amendments to the National Insurance Bill, with the object of obtaining fair treatment to pharmacists, have had most forcibly brought home to them the circumstance that the Government and legislators generally are lamentably ignorant of the fact that pharmacists alone are by law required to be specially trained for the performance of the duties involved in the supply of medicines. This fact has been of quite secondary importance as an argument for proper recognition of pharmacists under the Bill, whereas it should be a *prima facie* duty of the Government to see that the pharmacist gets his due. The purpose of Mr. Wells's address was to show that in more than half a century's legislation regarding the practice of pharmacy as a retail trade or as a profession the motive of the legislation has always been the safety of the public and not the advancement of pharmacy or the betterment of the pharmacist. One result has been that Government departments have come to regard pharmacists with indifference, and in some cases have quite overlooked the fact that the qualification of the pharmacist is essential to public safety in the dispensing and selling of poisons, which deplorable condition culminated in the Poisons and Pharmacy Act of 1908. On that occasion certain Government departments gave effect to the machinations of traders who found that their methods of business were at variance with the principles upon which the Poisons Laws of the three kingdoms have been formulated. Mr. Wells demonstrated very conclusively that without adding materially to the convenience of the public, the 1908 Act is seriously interfering with the administration of the Pharmacy Acts; and although he did not lead up to any specific suggestion for public inquiry, it is clear that some such inquiry will be necessary ere long if the Pharmaceutical Societies—as the administrators of the Acts—are to use these effectively for public safety. Another subject in Mr. Wells's address is the contrast which he afforded between British pharmacy and the craft as practised in France and Germany. He showed that the education and training required by pharmacists in the neighbouring countries are somewhat more onerous that what the British pharmacist has to go through, but certainly not more searching than what British pharmacists would gladly undertake, if they were assured—as French and German pharmacists are in a greater measure—that after qualification they would have the sole right to retail medicines and dispense medical prescriptions.

For the first time in the history of the Conference its proceedings were divided into two sections, or, rather, there has been added a new section entitled the Practice Section, which takes up part of the work which was done for some years by the Federation of Pharmaceutical Associations. The well-established business of the Conference —namely, the reading of papers dealing with chemical and pharmaceutical subjects specially relating to the improvement of Pharmacopœia methods and processes—is now called the Science Section, and to it sixteen papers were communicated. We print these with fair fullness in our report of the proceedings, and here we indicate as briefly as possible the subjects of the papers and the conclusions arrived at.

Indian Podophyllum.

Mr. John C. Umney, F.C.S., in a further note on *Podophyllum Emodi*, described the chemical examination of a consignment of the roots of that plant which had been gathered, after fruiting, for him by the Indigenous Drugs Committee, Calcutta, the object being to settle the disputed question whether Indian podophyllum may be used alternatively with American podophyllum. The examination showed that the resin obtained from it contained roughly twice as much podophyllotoxin as did resin from Indian root examined about twenty years ago, and more than twice as much as the American podophyllum resin. Physiological tests have shown hitherto that the Indian podophyllum is variable. Dr. W. E. Dixon has found that $\frac{1}{8}$ grain of the resin from the 1910 Indian drug acted efficiently.

Tincture of Opium.

Messrs. E. H. Farr, F.C.S., and Robert Wright, F.C.S., in a paper on "The Supposed Loss of Morphine in the Preparation of Tincture of Opium," proved by experiments that the loss is real, and varies from 0.8 to 9 per cent. of morphine, with an average of 4.78. The authors suggest that the loss is due to occlusion of the alkaloid in the opium, but they are making further experiments.

Indian Hemp.

Mr. Harold Deane, B.Sc., in a paper on extract of Indian hemp, proved once more that this preparation is an exceedingly varied substance. The B.P. extract is unsatisfactory, and in consequence there are on the market many non-official extracts which are more active. There has been some correspondence in the *C. & D.* recently on the subject, and Mr. Deane's paper may be regarded as an explanation of the variabilities. Mr. Deane finds that Indian hemp yields from 17 to 27 per cent. of alcoholic extract containing on an average 56 per cent. of resin, which is regarded as the active principle, while the drug from Madagascar yields from 17 to 27 per cent. of alcoholic extract containtaining from 76 to 93 per cent. of resin. The commercial extracts are also variable in alcohol solubility, but the ether solubility was almost complete in most cases, except one where 42 per cent. of the extract did not dissolve in ether.

Sal Volatile.

Mr. E. H. Pollard, B.Sc., communicated a paper on the preparation of spirit of sal volatile, in the course of which he showed how much of the oils of nutmeg and lemon distil with steam in different fractions, and that the aroma of the first fractions is much nicer than that of the later fractions; also that it is better to distil the oils with water alone. For the B.P. quantities he mixes the oils with two pints of water and distils one pint, mixes this with the alcohol, and adds the rest of the ingredients.

Thyroid Standard.

In a paper on the standardisation of dried thyroid gland, Mr. R. R. Bennett, B.Sc., F.I.C., suggested that it should be done on the basis of 0.15 per cent. of iodine, and he described Baumann's method for determining the iodine. It appears that the iodine standard is most commonly used commercially.

Linimentum Ammoniæ.

Mr. F. H. Alcock, F.I.C., finding that a sample of liniment of ammonia had gone quite solid, went into the whole subject, and suggested that the formula should be altered so as to give a minimum amount of water in the preparation. He suggests 3 oz. of almond oil, 8 oz. of olive oil, and 1 oz. of "800" ammonia solution.

Medicinal Extracts.

We had occasion some time ago to require the water-content of extract of quassia and could not find it in any book. Messrs. Squire & Sons were good enough to supply the lack. Messrs. K. C. Allen and T. Brewis have had similar experience in regard to extracts generally, so they have gone into the matter and communicated to the Conference the percentages of moisture contained in and ash yielded by twenty-two extracts. The authors also discuss consistencies of extracts, and dissented from Farr and Wright s suggestion to use the powdered crude drug as a diluent for dried extracts.

Arsenates of Strychnine.

Three were described by Mr. D. B. Dott, F.R.S.E. $B_2.H_3AsO_4$ decomposes in presence of water, the acid-salt $B.H_3AsO_4.2H_2O$ is soluble in water 1 in 34, and a second acid-salt, $B.(H_3AsO_4)_2.H_2O$ is soluble in 16¾ parts of water.

Strychnine Hypophosphite.

According to Mr. D. B. Dott, this is one of the most soluble strychnine salts (1 in 3.3 of water). It crystallises as $B.H_3PO_2.3H_2O$, all the water of crystallisation being lost at 100° C.

Spirit of Nitrous Ether.

Mr. Dott suggests that this preparation should not be kept ready-made, but instead pharmacists should keep two solutions, one being a solution of sodium nitrite and the other a mixture of sulphuric acid and alcohol—a half-drachm of the nitrite solution being added to 7½ drachms of acidified alcohol to make an ounce of spirit of nitrous ether —*i.e.*, a solution of ethyl nitrite and sodium sulphate in spirit.

Sodium Ethylate Solution.

This is so seldom used that it becomes dark-brown on keeping, owing to the action of the alkali on the acetaldehyde present in small quantity in commercial absolute alcohol. So Mr. Horace Finnemore reported, and he finds that if Kahlbaum's pure No. 1 methyl alcohol is used in place of ethyl alcohol a caustic solution is obtained which shows no trace of discoloration after two years.

Peppermint Culture.

An experiment on the herb farms of Messrs. W. Ransom & Son, Hitchin, was described by Mr. H. John Henderson. It has been stated that peppermint grown on the banks of a stream yields more oil than that grown elsewhere. The experiment disproved this statement by showing that a plant grown on the banks of a stream yielded 0.11 per cent., or 11½ lb. of oil per acre; on a heavy loam with chalky subsoil it yielded 0.4 per cent., and on a deep sandy loam 0.19 per cent., or 26¾ lb. of oil per acre. Mr. Henderson's communication contains the analytical details of the oils, showing that they were substantially similar in characters.

Diabetic Foods.

Mr. F. W. F. Arnaud, F.I.C., public analyst for Portsmouth, in a paper described his methods of analysis and the results of the examination of twelve commercial samples of diabetic bread, biscuits, flour, and food. He came to the conclusion that the products of one manufacturer alone are satisfactory, these showing 5.8, 6.8, and 7.6 per cent. only of starch, while all the others contained from 40 to 70 per cent. of starch and only 7.9 to 34.9 per cent. of protein—the approved manufacturer's containing from 66 to 86 per cent. of protein.

Bismuth Subchloride.

In regard to the constitution of this substance, Mr. J. B. P. Harrison, F.I.C., communicated the results of experiments which proved that this salt, as found in commerce, is of variable composition—BiOCl if made by interaction (1) of bismuth nitrate and sodium chloride, (2) of bismuth nitrate and hydrochloric acid, and (3) by solution of bismuth oxide in hydrochloric acid; or $Bi_{12}O_{13}C_{10}$ if made by boiling bismuth subnitrate in sodium chloride solution.

Bartsia Odontites.

This very common wayside plant (N.O. *Scrophulariaceæ*) has been examined by Messrs. H. Finnemore, B.Sc., and G. E. Town, who thought it might be like digitalis in action; but Dr. P. P. Laidlaw found the extract to have no poisonous or digitalis-like effect. The authors isolated crystals of mannitol from the alcoholic solution.

White Precipitate Ointment.

Mr. G. D. Elsdon, B.Sc., described how white precipitate ointment is analysed for Sale of Food and Drugs Acts purposes. It is washed with boiling petrol and normal hydrochloric acid—the former dissolving the basis, and the latter the white precipitate. Then the mercury is separated from the acid washings as mercuric sulphide, the author preferring that process to other methods.

Discussions.

Two or three of the papers provoked useful discussions, and the Portsmouth analyst's work on diabetic foods caused considerable comment. Several suggestions were made in regard to following up the matter; but eventually it was left to the Executive Committee to deal with. The reading of the papers finished in good time, as two papers which figured on the agenda were not received from the author in time for presentation to the Conference. It was agreed that the meeting has been a success and that the organisation of the local Committee has worked quite smoothly.

Sicilian Products in 1910.

A Good General Idea of the trade of Sicily during 1910 may be gathered from the annual report of the British Consul (Mr. MacBean), which has just been issued. The report deals with the commerce of the principal Sicilian ports (Palermo, Messina, Catania, Syracuse, Licata, Marsala. Trapani, etc.), giving the leading imports and exports from each. On the whole these returns show that Sicily had a good year, the products showing increased business, including sulphur, citrus fruits, citrate of lime, lemon-juice, wines, wine-lees, olive oil, sumach, almonds, and liquorice-juice. In some cases the increase is a very considerable one, while essential oils are among the few decreases. An account is given of the working of the Sicilian Sulphur Combine (Consorzio Obbligatorio) for the year August 1, 1909, to July 31, 1910, the figures showing that the production was rather under than above the demand, and that the amount of stocks and liabilities on warrants show improvement. There has been a reduction in the output of sulphur, from an average of 505,518 metric tons per annum during the years 1897-1906 to the present figures of 396.664 metric tons for 1909-10. This reduction no doubt represents an enormous loss to the island; but, on the other hand, the very heavy existing stocks (July 31, 1910, 596,128 metric tons) still unsold show that the crisis would only be aggravated by any return to former figures. It is not considered likely that the average annual output will again exceed 400,000 tons per annum, as no important new sulphur-deposits have been discovered, and some of the old ones are worked out. The profit-and-loss account of the Consorzio for the year 1909-10 shows 411,532*l.* gross profits and 279,281*l.* expenses and losses. The Consul refers at length to the working of the Camera Agrumaria or Citrus Chamber, and gives some particulars of the working of the Chamber from the recent report of the Italian Government Commission, which was referred to in detail in The Chemist and Druggist of August 13, 1910 (index folio 260). It would now appear that the situation and general outlook for the operations of the Camera have very much changed for the better during 1910. According to the provisional trade statistics of imports and exports for 1910 the exports of citrate of lime amounted to 6,475 metric tons (valued at 414,432*l.*), as against 2,380 metric tons (valued at 152,377*l.*) in 1909. The shipping ports were as follows :

From	1908 M. tons	1909 M. tons	1910 M. tons
Palermo	1,430	589	1,127
Messina	4,737	12	1,889
Catania	—	1,320	342
Syracuse	91	317	412

In addition to the above, 769 tons of concentrated and 324 tons raw lemon-juice were shipped from Messina. As regards essential oils, Palermo still remains the premier shipping port, the statistics provided by the Chamber of Commerce showing exports of 2,463 cwt. (2,420 cwt. lemon oil and 43 cwt. mandarin oil), of which 987 cwt. was shipped to the United Kingdom ; whereas Messina, judging from figures compiled from Custom-house statistics, only exported 129 tons of bergamot, lemon, and orange (United Kingdom 46 tons). It is stated that much trade which was diverted to other ports in the island in the early part of 1909 has now returned to Messina, but that does not seem so as regards the trade in citrus products and essential oils. Among the new industries, reference is made to the Fabbrica Chimica Italiana Goldenberg, which has decided to distribute its chemical works between Messina and Palermo. Probably citric acid will be made chiefly at Messina, and sulphuric acid, tartaric acid, cream of tartar, chemical manures, etc., at Palermo, where the company has 50,000 sq. metres of ground in the outlying suburb of Agnella.

Showcards.

We have been struck with the number of fine showcards which we have recently received—mutilated; used as packing for things worth scarcely a tithe of the cost of the showcards used for their conveyance. If the cards were fly-blown or shop-worn these lines would not be written, but some of them appear never to have been exhibited. One has on it three photographic prints as attractive as they are pretty, but they have been ruthlessly cut through to serve as protection for a sketch supposed to be worth paying for. A poor introduction to an artist! Anyone with the tiniest spark of the artistic in his nature would recoil from destroying a beautiful thing, even although it cost him nothing, which, we fear, is the reason why showcards are sometimes treated with disrespect. Surely, also, some consideration should be given to the donors of the cards. They usually send them to their clients with the object of helping the sale of their goods, and if those who get them refuse to use them properly, common courtesy demands that they should intimate the fact on a postcard, which costs but a halfpenny now.

Modern Advertising.

Most people are familiar with the advertisements in the daily and weekly papers which offer to send samples of the advertised product on receipt of name and address and probably a few stamps "to cover postage," but not so many are aware that the letters which are received from these announcements are a negotiable asset. It appears that "letter-brokers" buy, sell, or rent the letters received by a certain class of advertisers, and either sell the original letters or supply the names and addresses to anyone who will pay the price. One method of using the replies is to address a familiarly worded letter to the person whose reply to an advertisement has been purchased, and affix to it the actual signature cut from the letter. The receiver is naturally surprised at this evidence of a previous correspondence, and frequently has the curiosity to reply, when he or she is probably induced to purchase some article of more or less intrinsic value. We have had sent us by one of our subscribers a price-list of these letters for sale. Among these are such items as "100,000 mixed medical, etc.," "50,000 drink-cure, etc.," "15,000 rupture-cures," "12,000 rheumatic rings," "10,000 medical prize competition," "4,000 lean people," "1,500 stammerers," "118 superfluous hair," "100 blushing," "17,000 from people who bought a moustache-grower, etc." The list also states that letters are for sale regarding bad legs, finger-nail polishes, female pills, rheumatism, cancer, wind, perfume, etc. Perhaps if the people who replied to the advertisements had known of the public uses to which their letters would be put they would have been a little more wary.

"Rhubarb."

The etymology of this word and the history of the drug itself are both obscure, and a recent discussion in "Notes and Queries" has thrown no new light upon either. The word *rheum* is a Latinised form of a Greek adjective (*rheon*) derived from *Rha*, the Greek name of the rha-plant, which, according to Ammianus Marcellinus, a Latin writer of the fourth century A.D., was so called because it grew near the river Rha—that is, the Volga. But this plant was known long before Ammianus; both Celsus and Dioscorides mention it, and neither mentions the Rha in connection with it. Celsus calls it *radix Pontica*; Dioscorides says, "*rha*, some call it *rheon*, and some *rhian*, the Romans *rha Ponticum*." The statement of Ammianus appears, in fact, to be a mere guess, but it has been accepted by most modern philologists, among others by Skeat, who says positively, "Rha took its name from the *Rha* or Volga, the name of a river in Pontus"; and in reply to the remark that the Volga is not in Pontus or near it cites authorities to show that the name formerly included a good deal more than Pontus in Asia Minor. He does not, however, explain how it is that the original name appears to have been not *rha* but *radix Pontica*. Lemery, under *Rhaponticum*, says : "C'est-à-dire, *racine de Ponte*, parce que cette racine étoit autrefois apportée du Royaume de Ponte"; and Silvius, long before, had spoken to the same effect of rhubarb : "Rheubarbarum, a reu, quod est radix, et barbarum, regione ubi oritur." It is not for me to say which derivation is correct. Mr. Craigie, in the "O.E.D.," has, under *Rha* : "Said to be" from the ancient name of the Volga; and under Rha-pontic : "See *Rha* and *Pontic*"; which is quite non-committal. The three rhubarbs known to Dodoens were Rha Ponticum, growing near the Bosphorus (which his translator Lyte calls "Rha of Turkie"); Rha Barbarum, growing in "Barbarie"; and Rheum Seniticum, or Chinarum, from China. Gerard thus places these in the order of merit : The best is that from China, the second in goodness that from Barbary, the last and worst that from the Bosphorus and Pontus. Neither of these writers gives an entirely consistent account of the matter, but neither accepts the Rha of Dioscorides as the true rhubarb, and down to the close of the eighteenth century rhapontic and rhubarb were pretty sharply distinguished from each other.

WESTMINSTER WISDOM.

The Week in Parliament.

The Prospects of the Shops Bill.

It is now felt that in the present tangled condition of Parliamentary business nothing short of a miracle can place the Shops Bill on the Statute Book in the course of the present Session, however prolonged it may be. Mr. C. F. G. Masterman, who is contesting South-West Bethnal Green in the Liberal interest, and who holds the position of Under-Secretary at the Home Office, stated on Monday evening, in the course of an address to the electors, that only by general agreement in the House of Commons could the Bill now become law. Mr. Masterman has received at the Home Office a very large number of deputations from the representatives of the various interests affected under the provisions of the Bill, and he is well qualified therefore to be able to gauge the measure of opposition—or the reverse—which the proposals of the Government are likely to meet with in the long run.

Poisons and Pharmacy Acts (Ireland).

At the end of the questions in the House of Commons on Wednesday, July 26, Captain Craig gave notice of presentation of a Bill to make certain alterations in reference to the carrying on of the business of Pharmaceutical Chemists and Chemists and Druggists in Ireland.

The Bill was duly introduced, and its provisions are as follows :

1. (*a*) A body corporate may carry on the business of a pharmaceutical chemist in Ireland (1) if the business of the body corporate so far as it relates to the keeping, retailing, or dispensing of poisons, or to retailing, dispensing, or compounding of medical prescriptions, is under the control and management of a superintendent who is a duly registered pharmaceutical chemist or licentiate apothecary, whose name has been forwarded to the Registrar of the Pharmaceutical Society of Ireland to be entered by him in a register kept for that purpose, and who does not act at the same time in a similar capacity for any other person or body corporate; and (2) if in every premises where such business as aforesaid is carried on and is not personally conducted by the superintendent, such business is *bona fide* conducted under the direction of a superintendent by a manager or assistant who is a duly registered pharmaceutical chemist or licentiate apothecary. (*a*) [Provision is here made for the exhibition of the manager s certificate, as in the 1908 Act.] (*b*) A body corporate may use in Ireland the description of pharmaceutical chemist of dispensing chemist if the requirements in paragraph (*a*) of this sub-section as to the carrying on of the business are observed, and if the superintendent is a member of the board of directors or other governing body of the body corporate as the case may be. (*c*) A body corporate may carry on the business of a chemist and druggist or druggist in Ireland (1) if the business of the body corporate [so far as it relates to the selling of poisons] is under the control and management of a superintendent who is a duly registered pharmaceutical chemist, or duly registered chemist and druggist, or duly registered druggist, whose name has been forwarded to the Registrar of the Pharmaceutical Society of Ireland to be kept by him in a register for that purpose, and who does not act at the same time in a similar capacity for any other person or body corporate; and (2) if the premises where such business as aforesaid is carried on, and is not personally conducted by the superintendent, is *bona fide* conducted under the direction of the superintendent, by a manager and assistant who is a duly registered pharmaceutical chemist, or licentiate apothecary, or duly registered chemist and druggist, or duly registered druggist, and whose certificate of qualification is conspicuously placed in the premises or other place where such business is carried on.

2. A body corporate may use in Ireland the description of chemist or druggist if the requirements of paragraph (*c*) as to the carrying on of the business are observed and if the superintendent of the body corporate is a member of the board of directors or other governing body of the body corporate as the case may be.

3. Subject to the provisions aforesaid, Section 15 of the Pharmacy Act (Ireland), 1875, and Section 18 of the Pharmacy Act (Ireland), 1875, Amendment Act, 1890, shall apply to a body corporate in like manner as they apply to individuals.

4. The provisions of the Pharmacy Act (Ireland), 1875, and of the Pharmacy Act (Ireland), 1875, Amendment Act, 1890, with respect to the registers thereby authorised, subject to the modifications herein provided, shall apply to the registers directed by this Act.

5. So much of Section 4 of the Poisons and Pharmacy Act, 1908, as enable by-laws to be made for the purpose mentioned in paragraph (*d*) of that section shall apply for by-laws under this Act with the following modifications: (*a*) For reference to the Pharmaceutical Society there shall be substituted a reference to the Pharmaceutical Society in Ireland. (*b*) For references to the Pharmacy Act, 1852, and the Pharmacy Act, 1868, there shall be substituted reference to the Pharmacy Act (Ireland), 1875, and for the reference to Section 2 of the Pharmacy Act, 1852, there shall be substituted a reference to Section 16 of the Pharmacy Act (Ireland), 1875. (*c*) The reference [to apprenticeship according to regulations made under the principal Act], shall, for the purposes of this Act include service as apprentice or assistant, with a body corporate carrying on business in accordance with the regulations of this Act, which shall be regarded as if it were service as apprentice or assistant to an individual lawfully carrying on the like business.

Owing to several errors in transmission the above is not an exact copy, but it embodies all the provisions. It is not, of course, expected that the Bill will make any progress this Session.

Wholesale Druggists and Rectified Spirit.

Mr. W. S. Glyn-Jones, M.P., has continued his negotiations with the Treasury regarding the sale of rectified spirit by wholesale druggists, and has received the Chancellor of the Exchequer's consent to the following resolutions :

(1) An Excise licence for the sale for medicinal purposes only of rectified spirits not less than forty-three degrees above proof to duly qualified medical practitioners or registered chemists, or for use in hospitals, may be granted to a manufacturing or wholesale chemist or druggist upon payment of the duty of ten pounds.

(2) An Excise licence for the sale by retail of any wine placed by the Commissioners of Customs and Excise in a list of wines which are, in their opinion, medicated wines, may be granted to a registered chemist upon payment of a duty of ten shillings.

(3) Every such licence shall be granted in such form and subject to such conditions as the said Commissioners shall prescribe, and shall expire on the thirtieth day of June in each year.

(4) If any person holding a licence granted under this section sell spirits of wine of any description, or in any manner not authorised by his licence, he shall incur a fine of fifty pounds.

Consideration of the matter is going on with the view to the incorporation of these principles in the next Finance Act.

Sub-Post Offices and Various Trades.

Replying to a question by Mr. Charles Duncan in the House of Commons on Tuesday (as to the inconspicuousness of postal departments in small shops), the Postmaster-General said that every sub-postmaster is required to supply adequate accommodation both for the public and for the staff, and the conditions come under review periodically. If the Hon. Member would give him particulars of any cases he might have in mind in which reasonable requirements are not met, he would have inquiry made. Assistants at small sub-post offices are not in the direct employ of the department, it being incumbent on the sub-postmasters, who act as agents for the Post Office, to provide for the work out of remuneration they receive. In many cases the assistants are also employed in the sub-postmasters' private business.

Still at it.

Mr. Glyn-Jones has given notice of the following question for Monday, July 31 :

To ask the Secretary to the Treasury what steps, if any, have been taken by the Government to stop the practice of giving special trading facilities to the Civil Service Supply Association, Ltd., for trading on Government premises and in Government time with officials and others engaged in various Government departments.

In his report on the trade and commerce of the Morea and the provinces of Ætolia and Acarnania for 1910 the British Consul states that "pharmaceutical drugs and patent medicines of British manufacture are now being imported in yearly increasing quantities, and bid fair to replace their German, Italian, and French competitors, which hitherto held a monopoly."

National Insurance Bill.

OUR Parliamentary representative is informed upon high official authority that there is absolutely no truth in the very positive statement made by a Liverpool paper, and indeed in other quarters, that it is the intention of the Government not to proceed further with the National Insurance Bill this Session, and it is equally untrue to say that the health of the Chancellor of the Exchequer is being seriously affected by the strain of constant attendance in the House of Commons. It is a disappointment, of course, to the Ministry that the Labour party have shown such strong opposition to the Bill, an opposition which has made its progress so far much slower than had been anticipated. and there is authority for stating that if this opposition continues in its present degree the Government will have no option but to drop the second part of the Bill, which relates to the question of unemployment and which comes immediately under the purview of the President of the Board of Trade. As soon as the Parliament Bill has been finally disposed of it is confidently believed that the rate of progress with the National Insurance Bill will be of a much more rapid character, and that after Clause 14 has been dealt with the conduct of the rest of the measure may be comparatively smooth sailing.

In view of the striking developments which have taken place during the present week over the constitutional crisis arising out of the return of the Parliament Bill—with its added amendments—from the House of Lords, the National Insurance Bill has, for the moment, been laid aside. In the breathing space, however, the Chancellor of the Exchequer has been afforded an opportunity of resuming his interviews with the representatives of the various interests affected by the Bill, and notably with those connected with the voluntary hospitals in Great Britain and Ireland. This was on Tuesday, and the Chancellor was accompanied by the Attorney-General, Mr. McKenna, and Mr. Burns. He soothed the hospital authorities, saying that the Bill will not injure hospitals much, if at all. The precise date upon which the consideration of the Bill—and with it Clauses 13 and 14—will be resumed is at present uncertain, but it will probably be some time in the coming week, unless, of course, the exigencies of the present abnormal Party situation should render such a course impossible.

MEDICAL BENEFIT.

The Chancellor of the Exchequer has given notice of a number of additional amendments to Clause 14, dealing with medical benefit. In line 9, after "established," he proposes to insert "on such terms as, failing agreement, may be determined by the Insurance Commissioners." In line 14 the right hon. gentleman proposes to leave out "be agreed between the Society and the Committee," and insert "have been so agreed or determined." In lines 5 and 6 he proposes also to leave out "an approved Society may enter into an agreement with the local Health Committee for," and insert "a local Health Committee shall, on the request of any approved Society, take over."

Mr. Manfield has given notice for an erasure from Subclause 2 (the words which we print within brackets and in italics), and an addition (the part immediately following the italics):

> Every such society or committee shall also make provision for the supply of proper and sufficient drugs and medicines to insured persons, and no arrangement shall be made with a medical practitioner under which he is bound or agrees to provide drugs or medicine for any insured person at an inclusive fee, without the consent of the Insurance Commissioners, which consent they shall not [*give unless the circumstances of any locality situate in a rural district are such as to make it expedient to do so*] withhold when the circumstances in any locality make it expedient for their consent to be given. Provided also that the supply by any duly qualified medical practitioner for reward of drugs or medicine for any insured person in case of emergency or to meet the special needs of any special treatment of any insured person or the like supply gratuitously in any case shall not be a breach of or cause any disability under this Act either to any insured person or to any medical practitioner.

Questions in Parliament.

Mr. Houston asked the Chancellor of the Exchequer in the House of Commons on Monday, July 24, whether he is aware that in most of the Continental countries it is illegal for medical practitioners to dispense and for chemists to prescribe; and whether he proposes to adopt the Continental system in the National Insurance Bill.—Mr. Lloyd George replied that the German sickness insurance societies have had their own disputes with the doctor, and as a result are now paying higher fees than formerly, but there is no evidence to show that the medical treatment given to the insured is now unsatisfactory. No doubt the medical service is most efficient where the Sickness societies and the doctor are satisfied with the contracts under which it is given.

Sir H. Kimber also asked whether homœopathic doctors would be equally eligible under the Bill, and whether a registered practitioner, homœopathic or otherwise, would be able to dispense his own medicines if he desired to do so.

Friendly Societies' Attitude.

In the course of a conversation with a provincial pharmacist who is also a strong Friendly Society man, some points were brought out against the Bill which may be interesting. Our subscriber is a chemist in business in an important seaport town where the Friendly Societies are strong. In his particular town they can influence at least 1,500 votes, and naturally their good opinion is cherished by the sitting M.P. The feeling of the local Friendly Society officers is not favourable to the Bill, because, in their opinion, it reduces their control of the funds to a minimum and prevents the societies' members using the funds for purchasing their own houses at a moderate rate. They argue that the contributions of 7*d.* from employer and employé, together with the State 2*d.*, give the insured considerably less benefit than he obtained from sound societies like the Hearts of Oak for the same sum, and their feeling is that the ultimate result will be the disintegration of the societies altogether.

With regard to the resolutions passed at the pharmacists' meeting, the chemist contends that the plan may meet the wishes of pharmacists with assistants, co-operative societies, and stores, but it means ruination to the small chemist who is working single-handed, and needless expense to the approved societies. The approved societies, with the dread of the actuary before them and the three or five yearly valuation, cannot afford to be generous; they must obtain the best value they can for the money at their disposal. The resolutions recommend the most expensive way possible of obtaining medical benefit. An open panel and "go where you please" will, he thinks, either entail a lot of bribery, or the dispensing must drift to the stores. Will the wife or daughter, he asks, crowd into the small chemist's shops, and wait her turn patiently while he divides his attention between the ordinary run of penny trade and the prescription of the free medical panel? Will not the lady messenger rather prefer to stroll about the large drug-store, look at the library, examine the picture post-cards and silverware, while one of the staff devotes his entire attention to her prescription? If a member of the "Co-op.," business and pleasure can be combined, and the usual shopping will be done while the "Co-op." dispensing department fills the prescription.

The friendly pharmacist advocates instead central dispensaries under the charge of qualified dispensers, especially if regulations as to payment, etc., are framed on the Poor Law basis. The doctor would examine the patient under the same roof, and needless waste of "ornamental" medicines could be checked on the spot, instead of a grumble some months later when the prescriptions drop in from widely scattered pharmacies. The cost would be reduced to a minimum, while the highest quality of drugs could be maintained. Moreover, dispensaries could be made more easily subject to rules and to inspection, and as the members of the approved societies will have, either directly or indirectly, to pay for them, surely they are entitled to a strong voice in the management, instead of a representation of probably 1 in 18 on a Health Committee.

The idea of paying per scale, not *per capita*, is no doubt right, but our provincial critic questions if it can be managed. There are no statistics to go by, for few societies have any record of how many bottles of medicine its members take. If they are not in the club they take all they can get from the doctor, and no record is kept.

INTERVIEWS.

The chemists of Burton-on-Trent have interviewed their member of Parliament in regard to the chemists' interests under the Bill, and he promised to look after the matter when Clause 14 is reached.

The deputation of the Plymouth, Devonport, Stonehouse, and District Association of Pharmacists which came to London on July 16 interviewed Mr. A. Shirley Benn, Mr. Waldorf Astor, Sir C. Kinloch-Cooke, Mr. F. B. Mildmay, Sir John Ward Spear, and Lieut.-General Sir Reginald Pole-Carew. The interviews were satisfactory.

At the House of Commons on Thursday, July 20, Mr. Alfred Wiggington and Mr. Isaac T. Lloyd, Chelsea, had an interview with Mr. S. J. G. Hoare, M.P. for Chelsea, who received them very sympathetically. They were assisted by Mr. Glyn-Jones, M.P. Mr. Hoare stated that he was in full sympathy with chemists' views, and that he would support Mr. Glyn-Jones' amendments.

The Welsh deputation of chemists could not be arranged last week, many members being away. Mr. W. J. Roberts, Llandudno, was in the House on July 20, and interviewed Mr. William Jones, M.P., one of the Junior Whips. He promised to use his influence on behalf of the chemists. Sir Herbert Roberts, M.P., is also favourable to chemists' views. The Chancellor of the Exchequer could not see Mr. Roberts, but sent a message to the effect that he would give every care and sympathy to any statements that are sent to him by his chemist constituents. Mr. D. Arnott, Pontypridd, also had an appointment with Mr. Clement Edwards, M.P., who promised to give every consideration to the chemists' case.

Lord Charles Beresford, M.P., received on Thursday, July 20, a deputation appointed by the Portsmouth and District Pharmacists' Association, consisting of Mr. T. A. White (President), Mr. W. A. Bell (Vice-President), Mr. T. O. Barlow, and Mr. T. Postlethwaite (Secretary). Major Reed introduced the deputation, and Mr. White put before Sir Charles the points in the National Insurance Bill which call for amendment. Lord Charles asked a number of questions, and took the greatest pains to obtain a clear appreciation of the arguments submitted, frequently making use of homely examples. Addressing the deputation, he said they had made some strong points, and he admitted that the tariff system appeared to be the right one. Some of the proposed amendments which had come from another quarter were not acceptable to the Chancellor, owing, perhaps, to the fact that they would entail increased actuary costs; but that objection did not appear to arise in respect to the pharmacists' demands. Mr. White having thanked Lord Charles, the deputation withdrew.

The Chairman of the Executive of the National Union of Assistant Pharmacists and the Hon. Secretary of the Public Pharmacists' and Dispensers' Association attended the House of Commons to interview Mr. Glyn-Jones, M.P., on Friday evening, July 21. Mr. Glyn-Jones informed them that Dr. Hillier, M.P., had tabled a resolution for the formation of a Register of Dispensers, to include all those who have performed the duties for seven years, with or without qualification, and the chief arguments advanced in favour are: (1) That by the present provisions of the Bill 6,000 of these persons will be thrown out of employment; (2) that there are insufficient qualified pharmacists to do the work of supervising. Mr. Glyn-Jones added that No. 1 would be sufficient to induce the Committee to accept Dr. Hillier's amendment reported in the *C. & D.* last week. A letter has since been sent to Mr. Glyn-Jones on behalf of both associations, in the course of which Dr. Hillier's amendment is described as being "fraught with the very gravest danger to pharmacy, and especially to the assistant pharmacist. The main point to be urged against us seemed to be that there were not sufficient qualified pharmacists to do the work of supervising, not of dispensing. Further consideration induces one to ask, 'Is this true?' We estimated that there were possibly 10,000 practising pharmacists in the country. There is an estimate that the Bill will affect from ten to fifteen millions of people. I take the larger figure, and you have one pharmacist to 1,500 persons, not sick persons, but only potential clients. This is less than the German statutory allowance, where, I believe, a pharmacy is allowed to 2,000 inhabitants. The argument that these unqualified dispensers will be cast out of employment is as well met by the official resolution as it could be under the suggested resolution for registration. The pharmacist having an influx of work will require assistance, and will naturally obtain that assistance where skilled labour is available, but (and this is the important point) that labour being without status, then the direct supervision is a matter of real meaning. Given a new firm of 'registered dispensers' who can act (without supervision), you establish a class who will infringe upon the privileges of pharmacy more and more. You will urge the Apothecaries' Hall and Army Authorities to greater efforts to secure recognition with a good precedent, and for many years set back the educational standard of which we have been so proud. I would remind you that to many of us the certificate as pharmacist is all our capital, and it is not fair to subject us to a large influx of competitors, who cannot do else than bring down our wage to their lower level. Would it be possible to have any evidence offered to the Minister concerning the extraordinary difference in the value of the several certificates? . . . The danger is grave and imminent; pharmacists, particularly the assistants, are once more fighting for the value of the qualification, and should the amendment be accepted our means of livelihood will certainly be reduced and the standard of efficiency greatly diminished by the influx of such cheap and unskilled labour."

Monmouthshire.—Mr. A. Enoch, Blackwood, presided at a meeting of all the chemists in the Monmouthshire Valley, held at the Junction Hotel, Pontllanfraith, on July 20, when it was resolved: "That this meeting of pharmacists expresses its approval of the steps taken by the Pharmaceutical Society to secure modification of the National Insurance Bill, and pledges itself to support the proposals submitted to the Chancellor of the Exchequer on June 1." Copies of the resolution were directed to be sent to the Chancellor of the Exchequer, the Right Hon. Lord Ninian Stuart, Sir Ivor Herbert, Bart., M.P., Mr. Glyn-Jones, M.P., Mr. Clement Edwards, M.P., and Mr. Tom Richards, M.P.

Business Knowledge is essential to everyone connected with the retail drug-trade. It helps to turn examination knowledge into money. A great aid to getting business knowledge is our book entitled "Opening a Pharmacy," published at 2*s.* 6*d.* (by post from 42 Cannon Street, London, E.C., 2*s.* 9*d.*). It may be obtained from most wholesale houses at the published price.

Damages in Lieu of Notice.—At the Woolwich County Court, before Deputy-Judge Layman, on July 26, Bernard Harbottle, a chemist's assistant, of Hay View, Hadleigh, sought to recover from David Usborne Still, chemist, Charlton, 14*l.* 10*s.*, being the balance of fifteen weeks' wages in lieu of a month's notice. The defendant counterclaimed for 5*l.* from the plaintiff on an agreement. Plaintiff said he worked for the defendant at his shops in Artillery Place, Woolwich, and at Charlton, from January 20 to May 5, when he was summarily dismissed. He lived at the Charlton shop. The defendant said he dismissed the plaintiff on two occasions because of drunkenness, and on each occasion he took him back into his service. When he took him back on the second occasion he required him to sign an agreement, plaintiff undertaking to abstain from drink during business hours, and to pay a penalty of 5*l.* if he neglected or damaged the business. Finally, the plaintiff dismissed himself. The defendant's wife said that one night the plaintiff was brought home to the Charlton shop in a drunken condition by a policeman. He was frequently under the influence of drink. Recalled, plaintiff denied that he was taken home or accompanied home by a policeman. His Honour: Did you ever arrive at the door at the same time as the constable, or did you ever see a constable when you went home?—Oh, yes, I usually saw two. (Laughter.) The defendant declined to pay the costs of an adjournment so that the policeman might be called, and his Honour gave judgment for plaintiff for 11*l.* 10*s.*, dismissing the counterclaim.

British Medical Association.

Annual Exhibition.

THE first public event on Tuesday morning in connection with the meeting of the British Medical Association at Birmingham was the opening of the Exhibition of surgical instruments, drugs, foods, etc., which was held in one of the annexes of Bingley Hall. The Lord Mayor of Birmingham (Alderman W. H. Bowater), who was accompanied by the President (Sir Henry Butlin, Bart.), the President-elect (Dr. Saundby), Sir Thomas Barclay, and others, performed the opening ceremony. The arrangement of the exhibits redounded to the credit of those who devised the scheme. Around the walls were distributed numbered benches, and two rows equally elaborate and beautifully upholstered ran down the centre. The first exhibit to be noted is that of Lemco and Oxo. The stand of Siemen Bros. & Co. was a capital exhibit, illustrating the variety of ways electricity is adaptable to the service of the medical man and the surgeon. Down Bros., Ltd., London, exhibited surgical instruments, and the Dowsing Radiant Heat Co., Ltd., had a fine display of their apparatus, while Philip Harris & Co., Ltd., and other firms also exhibited surgical goods. We proceed now to refer briefly to

The Medical Exhibits.

Parke, Davis & Co. had an imposing exhibit of their special preparations. In crystal-glass cylinders and vases were shown such preparations as cascara evacuant, eudrenine, the well-known standardised fluid extracts, together with oculets, palol, pituitrin—which the attendant specially emphasised as their very latest. Vaccines (bacterial and otherwise) were also shown.

James Woolley, Sons & Co., Ltd., had a nice display of their special preparations and pharmaceutical products, among which might be mentioned Jecovol, a palatable cod-liver-oil emulsion with glycerophosphates; Valkaza, their ideal nerve-food; Ergoval, a highly active liquid extract of ergot (1 in 1); their milk food, which has a high reputation in the North; malted rose food, sanitary rose powder, and tabellæ and capsulæ in great number.

Zimmer & Co., Ltd., London, showed such substances as euquinine, the well-known tasteless quinine, and its derivatives in tablets, pills, and the like. Neighbouring stands were occupied by the Theinhardt's Food Co., London, and the Brusson Jeune gluten bread and preparations.

A costly display by the Saccharin Corporation, Ltd., came in for a good deal of attention. It consisted of novocaine and its several preparations, together with pergenal, a solid compound of hydrogen peroxide, dissolving immediately in water to make a useful solution of hydrogen peroxide and boric acid, extensively employed as an antiseptic in dentistry and surgery.

The stand occupied by Charles H. Phillips Chemical Co. contained samples of milk of magnesia. It is apparently a preparation which does not deposit. A little line of aqueous fluid might be seen on the top of their long exhibit cylinder, but that was added in order to prevent the preparation from freezing, which it is liable to do in certain weather. The company's exhibit also embraced their phospho-muriate of quinine.

The Bayer Co., Ltd., had a stand laden with specimens of their newer products, such as Adalin, ferro-sajodin, guaiacose, gynoval, liquid iron somatose sophol, spirosal, Alpin, Jothian, and exhibited many others in beautiful glass vases and forming a conspicuous exhibit.

Callard & Co. had a nice exhibition of their starchless and sugarless foods, and the stall was presided over by Mr. James, a pharmaceutical chemist and a "Square" man.

Reynolds & Branson, Ltd., had quite a large stand, which included their elaborate apparatus for intramuscular and intravenous injection of salvarsan, Ehrlich-Hata's remedy "606"; apparatus for the local application of carbon-dioxide snow; apparatus for testing urine; and apparatus for blood-tubes, safety suction, etc. A celluloid dressing for use in a doctor's bag was an interesting feature; the material is light and tough, cannot break with a fall, and has the appearance of an old horn lantern. They also showed standardised drugs, aërated waters, fumigating-pipes, and a very interesting improved non-greasy application in the form of a soft ointment, which is readily absorbed and possesses antiseptic, astringent, and healing properties.

The display by Cadbury Bros., Ltd., was made instructive by reason of the exhibition of cocoa materials from their crude state to the finished article. Passing a fine stall of the Friedrichshall Water Co., we came to that of Huxley Pharmaceutical Products. Adjoining, Wyleys, Ltd., Coventry, had an excellent display of their preparations, including Bitropels, cod-liver-oil emulsion, concentrated liquors, medicated pastilles, ointment in flexible tubes, and a beautiful display in tall glass cylinders of pills, pearls, tinctures, syrups, and "Wylettes" (glass capsules containing sterilised hypodermic solutions). Neighbouring stands were occupied by the Miol Manufacturing Co., Ltd., Horlick's Malted Food Co., W. A. Wharram, Ltd., Leeds (who had a nice display in cylinders of their several galenical preparations); the Sanitas Co., Ltd. (who showed their latest preparations, including Sanitas Sypol and Sanitas Bactox); Ingram & Royle, Ltd., mineral-water importers; Armour & Co., Ltd. (who showed pepsin and its preparations, pancreatin, glyco-lecithin, and junket-powders).

Savory & Moore, Ltd., showed pancreatic emulsion, magnesia compound, and gelatin ophthalmic discs, together with other preparations, such as fructolax and aperione, etc. The attendant made interesting experiments, in which he showed the device of Mr. J. E. Saul, F.I.C., for differentiating between fresh milk and boiled milk, the reagent used being ortol, in conjunction with a trace of hydrogen peroxide; a marked colouring action is obtained to differentiate between the two.

Bovril, Ltd., Mellin's Food, Ltd., A. Wulfing & Co., and the Apollinaris Co., Ltd., followed in order, and the visitor next arrived at the fine stand of Burroughs Wellcome & Co. While this firm placed before the medical profession the "tabloid" and "soloid" forms of medication, many of which were of the very latest, to some visitors the plants growing in pots were the most charming feature of the stall. They were taken from the firm's materia medica farms at Dartford, and included golden seal, belladonna, henbane, *Datura Metel*, broom, Calabar bean, sea poppy, squirting cucumber (with the fruit nearly ripe), black pepper, a colocynth plant with the fruit nearly full grown, Indian hemp and flower, cotton, aconite, nux vomica, peppermint, dandelion, foxglove, lavender, *Datura Stramonium* (in fruit and flower), and several others. Epinine (the synthetic substance discovered by investigation in their own laboratories), Lodal, pituitary extract, and numerous other preparations were also shown.

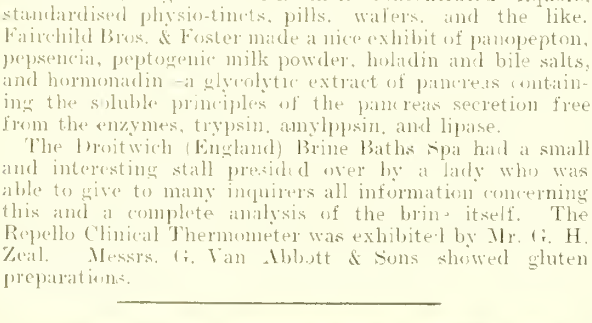
A hurried survey took our reporter past the stalls of Cerebos, Ltd., and Oppenheimer, Son & Co., Ltd., whose exhibit included their mercury atoxylate cream 10 per cent. and the latest palatinoid developments. The exhibit by Brady & Martin, Ltd., was in charge of Mr. Stewart. There prominence was given to the hand-filled gelatin capsules, pills of all kinds, tablets, and cylinders charged with beautiful preparations of digitalis, squill, and strophanthus, whose activity had been carefully verified by clinical test. Further there were shown costly specimens of epinephrin. Petrogen, petrosol, and pimelum (an improved ointment-base) were also shown, as well as a standardised preparation of thyroid gland (0.2 per cent. of iodine).

Passing on, the stands of Fassett & Johnson, of A. C. Barnes Co., of the California Fig Syrup Co., and of Virol, Ltd., commanded attention; then came a fine exhibit by A. & M. Zimmermann, London, of fine chemical and synthetic preparations, including hormonal, medinal, and other remedies. This firm also showed Kalle & Co.'s pharmaceutical preparations, and the preparations of H. Finzelberg's Nachfolger. Radium, Ltd., exhibited apparatus for rendering water radio-active.

The next stall was that of Southall Bros. & Barclay, Ltd., probably the most outstanding in the Exhibition, in charge of Mr. Thomas Barclay, Mr. E. W. Mann, and

Mr. Bennison. Sir Thomas Barclay occasionally looking in. The exhibit was divided into two parts, one representing chemicals and galenicals, and the other the surgical side. The former included Vitafer, a tonic food, a combination of the proteins of milk with the glycerophosphates of magnesium, calcium, and sodium. It is an entirely British product, being prepared at the firm's works at Minsterley, in Shropshire, a place hitherto known for its celebrated lead mines. The model apparatus for the production of Vitafer was shown, also glycerin, glycerophosphoric acid, syrupy phosphoric acid, and huge cylinders containing precipitated casein, lacto-albuminum, dried proteins, and the finished article. As the firm prepare almost everything in connection with their business, it was not surprising to see huge specimens of crystallised borax, potassium bichromate, copper sulphate, fine scales of ferri quin. cit., and beautiful crystal-like glass cylinders containing elixirs, one of calcium iodide, which seems to have shot into favour with the medical profession for "boils and blains." A model of the Balstead cod-liver-oil factory was an interesting and picturesque exhibit. Hard by were the Sir James Sawyer's remedies and ethereal tinctures and A1 castor-oil, cod-liver oil, olive oil, and several other oils. In the department devoted to surgical dressings samples were shown of the principal growths of cotton—American, Brazilian, Egyptian, Peruvian, East Indian, and East African. A particularly interesting sample was that of Florida Sea Island, which has the longest staple of any cotton grown. Another exhibit was a showcase illustrating the different stages of manufacture from raw material to the cloth, the warp of fine cotton yarn used for gauze containing just 6.165 miles. A new and interesting textile fabric is Celtex, for surgical and hospital use. C. J. Hewlett & Son, Ltd., showed a large stock of their preparations new sprays, new inhalers, and new surgical instruments, together with their concentrated liquors, standardised physio-tincts, pills, wafers, and the like. Fairchild Bros. & Foster made a nice exhibit of panopepton, pepsencia, peptogenic milk powder, holadin and bile salts, and hormonadin—a glycolytic extract of pancreas containing the soluble principles of the pancreas secretion free from the enzymes, trypsin, amylopsin, and lipase.

The Droitwich (England) Brine Baths Spa had a small and interesting stall presided over by a lady who was able to give to many inquirers all information concerning this and a complete analysis of the brine itself. The Repello Clinical Thermometer was exhibited by Mr. G. H. Zeal. Messrs. G. Van Abbott & Sons showed gluten preparations.



Living made Easy.

This is reproduced from a facetious engraving published in 1830. It represents a revolving hat "which by a slight touch presents its wearer with eye-glass, cigar, scent-box, spectacles, hearing-trumpet, etc., etc., without the intolerable trouble of holding them." The vinaigrette shown in use on the left is of a style seldom seen nowadays, and the progress in the last eighty years of the optical industry is well exemplified by the illustrations of spectacles and eye-glasses which were probably in 1830 the acme of the spectacle-makers' art.

Batoum Petroleum forms a gigantic industry. In 1910 the exports were 229,075,517 gals., consisting of petroleum, 151,263,561 gals.; machine oil, 38,591,385 gals.; mazout, 21,225,505 gals.; spindle oil, 5,351,020 gals.; solar oil, 11,054,961 gals.; and cylinder oil, 1,589,085 gals.

The Turin Exhibition.

Had it not been for the Exhibition Department of the British Board of Trade, the International Exhibition of Industries and Labour at Turin would have been little heard of in this country. It is greatly to the credit of that department and its committees that several hundred British firms consented to exhibit their products, and it is still more to the credit of the firms that they were among the first exhibitors to get their displays ready. The Exhibition is situated on both sides of the River Po, and was formally opened by the King of Italy on April 29, but it was only at the beginning of this month that it could be said to be complete. The British Pavilion covers 20,000 square mètres on the north-east side of the river. The arrangements for exhibiting are what the Board of Trade department has established—viz., the Board gives the space and cases to the exhibitors free, and they may do as they like, within limits, to effectively display their goods. The exhibits which interest our readers are found in several groups. For instance, under Chemical Industries the following have exhibits:

Baird & Tatlock, Ltd.
A. Boake, Roberts & Co., Ltd.
Borax Consolidated, Ltd.
British Cyanides Co., Ltd.
The British Drug Houses, Ltd.
Brunner, Mond & Co., Ltd.
Burroughs Wellcome & Co.
Cassel Cyanide Co., Ltd.
Castner-Kellner Alkali Co., Ltd.
Edward Cook & Co., Ltd.
Crosfield & Sons, Ltd.
Gas Light and Coke Co.
Howards & Sons, Ltd.
International Salt Co., Ltd.
Johnson, Matthey & Co., Ltd.
William Martindale
Mond Nickel Co., Ltd.
Ozonair, Ltd.
Jas. Pain & Sons.
Price's Patent Candle Co., Ltd.
Read, Holliday & Sons, Ltd.
Rosmarine Manufacturing Co.
Scottish Mineral Oil Association.
Silica Syndicate, Ltd.
Society of Apothecaries of London.
South Metropolitan Gas Co.
Thermal Syndicate, Ltd.
Tintometer, Ltd.
United Alkali Co., Ltd.
Wellcome Chemical Research Laboratories.
Wellcome Physical Research Laboratories.
Whalley's Sanitary Fluid Co.
Williams Bros. & Co.

Scientific instruments are exhibited by Chance Bros., F. Darton & Co., the Morgan Crucible Co., Ltd., L. Oertling, and Reynolds & Branson, Ltd.

Perfumery, soaps, and toilet-preparations are shown by F. S. Cleaver & Sons, Ltd., the Erasmic Co., Ltd., John Gosnell & Co., Ltd., and Wright, Layman & Umney, Ltd. (whose exhibit is confined to Wright's coal-tar soap and its congeners).

In the Foods Section are exhibits by Kilner Bros., Ltd., Liebig's Extract of Meat Co., Ltd., Mellin's Food, Ltd., and Tooth's Extract of Meat Co. Several good photographic exhibits (including Griffin's) are displayed, and Aerators, Ltd., are grouped under Ceramics—a rather red-tapeish delegation of the popular sparklet combination. We subjoin notes in regard to some of the exhibits:

A. Boake, Roberts & Co., Ltd., make an effective display of sulphites, anhydrous sulphurous acid and kindred products, besides essences and colours used in the manufacture of aërated beverages, malt extract, and special chemicals, among them amyl alcohol, amyl acetate, and potassium sulphide—the last of special interest in Italy as being used for counteracting vine-diseases.

Borax Consolidated, Ltd., own mines from which they extract raw materials (chiefly sodio-calcite and pandermite) for the production of borax and boracic acid. All these are exhibited in a striking manner with calcined borax, jewellers' borax, and borate of manganese.

The British Drug Houses Ltd. have a handsome oblong octagonal upright case, in which they make a Tetradomic display of their own manufactures. Prominence is given to ninety pharmaceutical chemicals, including "P.P.P." potassium, sodium, and lithium citrates, zinc sulphate, sodium sulphate, and sodium phosphate (feathery crystals), and a complete series of scale preparations. A second section of the exhibit is devoted to pharmaceutical preparations—viz., galenical preparations, lozenges, capsules, tablets, pills, and "sempules." The chemical and galenical sections are linked by an exhibit of effervescent preparations and resinoids and oleo-resins (*e.g.*, aloin, gingerin, apiol, and capsicin). The fourth section is devoted to a series of sixty fruit-essences, "natural and artificial," and a representative series of odorous and flavouring principles, either synthetic or extracted by chemical and physical processes from natural products in the company's own laboratories, besides essential oils, terpeneless essential oils, and specimens of natural raw materials for the flavouring and odorous fine products. The exhibit is the finest ever made by the company.

Brunner, Mond & Co., Ltd., exhibit soda-products made by the ammonio-soda process, besides salts of ammonia (including the chloride and keltoids), bleaching-powder, calcium chloride, pure zinc, and pure cadmium. These are exhibited well.

Burroughs Wellcome & Co. make a very attractive exhibit of their manufactures in all departments of medicine and for surgical purposes, including the synthetic products made as the result of research by their workers. With these the photographs of their materia-medica farm at Dartford make a contrast, and suggest that old drugs hold their own well. The exhibit of the Wellcome Chemical Research Laboratories illustrates the results of original investigations conducted in these laboratories. It comprises a large number of specimens representing substances obtained in the course of various researches, many of them being entirely new compounds. The exhibit is situated in the British Pavilion, within a short distance of the entrance from the Machinery Hall, and pamphlets in Italian are given to interested visitors.

Edward Cook & Co., Ltd., have arranged their exhibits in three sections. In one the principal item is "Cofectant" (Cook's disinfectant fluid), with the table from "The Lancet's" disinfectants report in English, French, and Italian. A giant tin, being a facsimile of a package of the preparation, attracts attention. Various preparations of "Cofectant" are also exhibited. The second section consists of toilet-soaps, and a third is devoted to household-soaps. Besides this exhibit Messrs. Cook are represented in the Science Laboratories, where one of their analysts demonstrates the bacteriological methods of testing and examining disinfectants.

F. Darton & Co. exhibit barographs, baro-thermographs, thermographs, hygrographs, barometers, thermometers of all kinds, rain-gauges, surveying-instruments, and sunshine-recorders. A wonderful variety, well displayed.

The Erasmic Co., Ltd., exhibit "Erasmic" soaps and perfumes, including their latest perfumes, "La Reine d'Egypte" and "Frisson d'Amour." Joseph Crosfield & Sons, Ltd., show household-soaps, "Carbosil" (a water-softener, bleacher, and washing soda in powder), and a series of chemicals, among them solid caustic soda, silicate of soda, and pure glycerin.

Howards & Sons' exhibit comprises the salts of the cinchona alkaloids, including quinine sulphate in sugar-coated tablets, silver-coated pills and compressed tablets, ammoniated-quinine tablets, chocolates containing quinine tannate, and a full range of the salts of quinine other than sulphate. In the scientific section of the exhibit there is a collection of the rarer salts of cinchona, besides caffeine and cocaine, including some that are now almost unobtainable, as they date from the time when many spurious species of cinchona-bark were on the market, and the experience and opportunities of the firm have enabled them to bring together from their collections of many years past some products that have almost disappeared and are now quite irreplaceable, such as the salts of cinchonamine, concusconine, quinicine, and cupreine. The exhibit also contains specimens of iodides and iodoform, besides sodium bicarbonate and its preparations, camphor, and other pharmaceutical chemicals.

W. Martindale's exhibit is a fine display of amyl-nitrite capsules, coumaric derivatives (sodium ortho-coumarate injection and tylmarin), erythrol nitrate, nitroglycerin, mannitol nitrate tablets, arsamin, "Formosyl" preparations, trilactine preparations, and outfit for the preparation of curdled milk, and many special galenicals, besides the firm's publications.

Reynolds & Branson, Ltd., make a splendid display of lanterns, in which are represented the requirements for practically all kinds of scientific demonstrations. Rarely, if ever, has so complete a display of British-made lanterns been brought together in an international exhibition abroad. The Stroud and Rendell science lantern, the "University," the "College" and the "Rystos" lantern microscope and polariscope are included, while many accessories and ingenious appliances for ensuring correct projections are also shown. The whole exhibit demonstrates the completeness of the company's manufacturing resources and their ability to cope with scientific developments, so far as these can be illustrated by optical means.

Williams Bros. & Co.'s exhibit consists of coal-tar colours for all industries, such as water nigrosine for burnishing and finishing-inks for boot-manufacturers; oil nigrosine and orange for boot-polishes; colours for the manufacture of writing, stencilling, and endorsing inks, in which are included special blue and black for iron and galls inks; alkali-resisting colours for soap-makers; woodstains soluble in water, alcohol, turpentine, and other solvents; and harmless colours for beverages, confectionery, and foods.

Dresden Hygiene Exhibition.

The British Government have not, for various reasons, extended their recognition to the Dresden Hygiene Exhibition, but have nevertheless expressed satisfaction with the work of the Committee which organised the British section. The British section, which is comparatively small, is divided into (1) tropical medicine, (2) hygiene in India, (3) micro-biology, (4) infectious diseases, (5) syphilis, (6) cancer reseach, (7) combating tuberculosis, (8) care of the sick, (9) school hygiene, (10) life-saving, (11) town and house building, (12) ventilation, heating and water supply, (13) removal of refuse, (14) industrial poisoning and diseases, (15) military hygiene. The Liverpool School of Tropical Medicine exhibit objects dealing with yellow fever, plague, sleeping sickness, etc.; and the London School of Tropical Medicine has drawings explaining the cause of malaria, black-water fever, etc. The Protozoological department of the London University, the Lister Institute, and Dr. Twort are also exhibiting, the last-mentioned the bacillus of leprosy. In the microbiological group Sir Almroth Wright deals with the opsonic index, and Mr. H. Wellcome shows vaccines and antitoxins; while Dr. Bashford has an extensive exhibit dealing with cancer research. The organisation of the London hospitals is well dealt with, and Dr. Kerr, of the London County Council Education Department, sends a number of models to the School Hygiene section.

The German section covers a very large space and is subdivided into numerous departments. Hall 11 is devoted to chemicals, scientific instruments, and cosmetics. Among the ninety-six chemical firms exhibiting are C. F. Asche & Co., Hamburg, who show pills, pastilles, and compressed goods; Bauer & Co., Berlin (Sanatogen); P. Beiersdorf & Co., Hamburg, show plasters, medicated soaps, liantral (a medicinal coal-tar), gonostyles (for gonorrhœa), leukoplasts, Pebeco tooth-paste, Nivea soap, and Axmann's radiophor; C. A. Büchner, Rudolstadt (ethereal oils and pharmaceutical extracts); Chemische Fabrik Helfenberg A.G., vorm. Eugen Dieterich, Helfenberg, show among other medicinal chemicals Blutan (organic iron and manganese preparation) and Regulin; Chemische Fabrik von Heyden A.G.; Chemische Fabrik Dr. Klopfer (glidine and its combinations); Gesellschaft für Chemische Industrie in Basel; Dr. Graf & Co. (Byrolin and Grafolin); Dr. A. Gude & Co., G.m.b.H. (Gude's manganese, iron, and pepton) and mensan (uterine hæmostyptic); W. Pearson, Hamburg (creolin, pacocreolin, medol, and hycol); Plasmon G.m.b.H. (plasmon preparations); Saccharin-Fabrik, Aktiengesellschaft, vorm. Fahlberg, List & Co., Salbke-Westernhüsen (saccharin, benzoic acid, ammonia, iron chloride, etc.); Dr. Theinhardt's Nährmittel-Gesellschaft m.b.H. (hygiama).

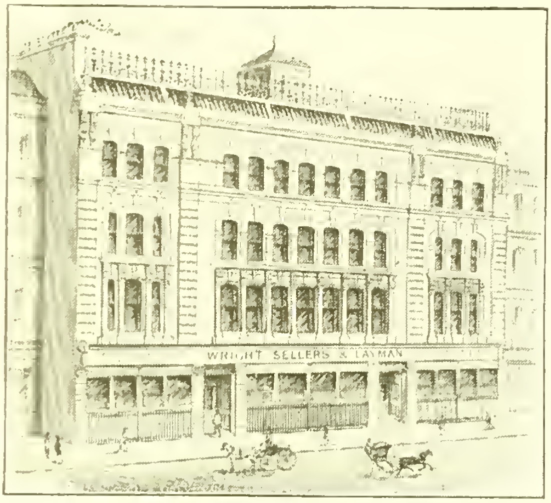
The exhibitors in the Cosmetics section included Georg Dralle, Hamburg; L. Leichner, Berlin; F. A. Sarg's Sohn & Co. and F. Wolff & Sohn, Karlsruhe.

Indigo Cultivation.—According to "The Java-Bode," Baron Schrottky, in the course of an address to indigo planters at Mozufferpore, pointed out that a method has been devised by means of which natural indigo can be put on the market in paste form, and that in this form it will be better able to compete with synthetic indigo, as it can command relatively much higher prices than in the dry state. He suggested that indigo-planters should exert themselves to obtain a subsidy from the Bengal Government for the erection of plant for the preparation of indigo paste, and that at least 15 tons of it should be marketed this year. In addition he recommended greater care in the cultivation of the crop, and that the Java-Natal plant should be grown, as it furnishes more and better indigo than the kinds now grown in India.

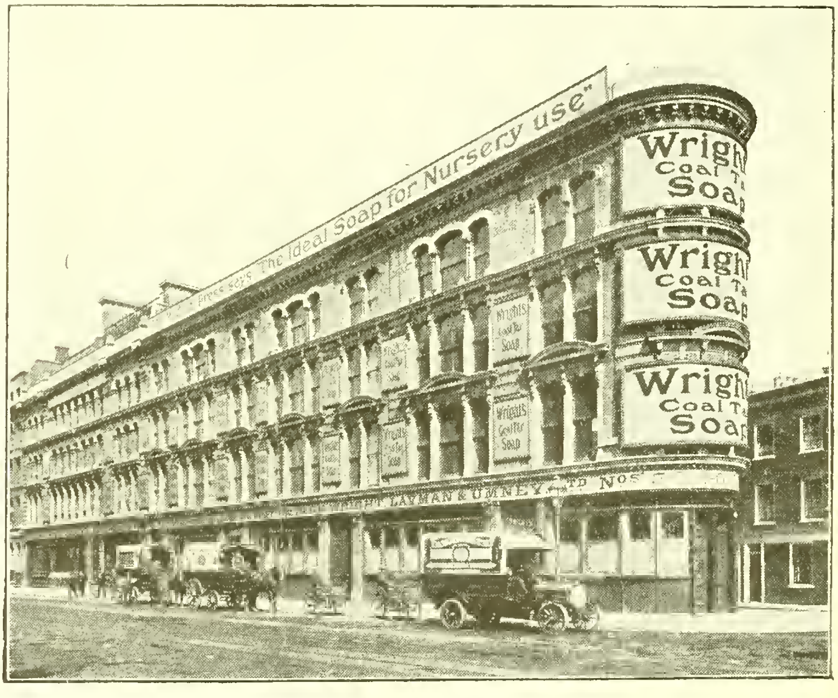
1871—1911.

An anticipation of the Jubilee of Wright's Coal-tar Soap, which will be celebrated shortly.

On a recent visit to Messrs. Wright, Layman & Umney's premises in Southwark Street, London, S.E., we found that the workmen were engaged on internal alterations, the company having acquired long leases of Nos. 44 and 46. making their numbers 44 to 50, and giving them a frontage of 180 ft. in Southwark Street. The whole of this extensive frontage has been covered with artistic chocolate and yellow enamelled iron advertisements of Wright's coal-tar soap, and the east corner of the building is finished off with three signs measuring 20 ft. by 8 ft. The first of the illustrations which we give is from a photograph of the premises as they were in 1871, when the firm was Wright, Sellers & Layman, and the second shows what Messrs. Wright, Layman & Umney, Ltd., are occupying. At No. 46 new general and private offices are in course of construction, and it is expected that these and other alterations to be effected will give not only greater space in the packing and despatch departments, but will also greatly facilitate business. We may note that the premises in 1871 sufficed for all the business done by the firm. Now the company have, apart from the Southwark Street premises, a laboratory, drug-mills, and soap factory at 66 and 68 Park Street, Southwark, as well as a storage warehouse in Union Hall. These facts illustrate the great progress that the business has made—a progress which is due in part to the remarkably increased popularity of Wright's coal-tar soap during the past two decades. The advertising undertaken in regard to this speciality has been effective and fortunate, and chemists have shared in the good results. The next venture in this will be on August Bank Holiday (Monday, August 7), when the first page of the "Daily Mail" will be entirely occupied by a Wright's soap advertisement, showing about a dozen of the views from the Views Competition book, and telling the public: "Ask your chemist for a free copy." On the Bank Holiday and after there is likely to be a big demand for these books, and chemists who have not a sufficient supply should write to Messrs. Wright, Layman & Umney, Ltd., in advance.



The 1871 Premises.



Offices and Warehouses of To-day.

Coccidiosis of Poultry.

Fowls are susceptible to attacks of the organisms called coccidia, but are far more resistant than turkeys. The fowl appears to infect the turkey, and may be the starting-point of a serious plague—"Blackhead"—among turkeys. "The Journal of the Board of Agriculture" in a recent issue gives the steps that should be taken to eradicate the disease from a poultry-yard:

(1) it is known that coccidia live for twelve months, possibly much longer, after being evacuated by an infected bird. It is therefore practically impossible to disinfect a poultry-run, and a change to fresh ground is necessary. If, however, the infected stock is moved to fresh ground, that ground will rapidly become infected. The old stock should therefore be left where it is, any birds which show symptoms of the disease being promptly killed. Only newly hatched chickens should be placed on the new ground, and all brooders, coops, feeding and watering utensils should be thoroughly disinfected before use. There must be no communication with the old infected yard.

(2) If hens are used for hatching there is a danger that they may infect the chicks, but if hens are preferred, then broody hens must be purchased from a clean stock. Some of the infected hens may deposit coccidia on the shell of the egg, and if the disease has attacked their oviducts coccidia may be found inside the egg. In either case the young chick may become infected, and suffer from the disease known as "white diarrhœa of chicks." All eggs, therefore, before being set should be dipped into a solution of 90 per cent. of alcohol and 10 per cent. of water.

If these suggestions cannot be carried out, or if fresh ground cannot be provided, the best procedure is:

(1) To kill all birds exhibiting the first symptoms of the disease; (2) to take off about 3 in. of the top soil of the most frequented parts of the run and disinfect or burn it; (3) to disinfect thoroughly all houses, roosts, laying-houses, food and water utensils; (4) to use only healthy hens for sitting; and (5) to place eggs in a solution of 90-per-cent. alcohol before setting them.

NOTES AND NOVELTIES.

Triple Essence of Carnation.

The British Drug Houses, Ltd., Graham Street, London, N., have added to their series of perfumes a triple essence of carnation, which is a faithful reproduction of the odour of the natural flowers. The essence is quite water-white, and the odour is lasting and so strong that a little of it goes a long way. It is obtainable in bulk at 11*s.* per lb.

"Tanglefoot" Fly-paper.

A new size in "Tanglefoot" fly-paper has been introduced. This is 8 in. by 14⅛ in., and thus gives a large surface for capturing flies. It sells at one penny, and should be a popular line during the tropical weather, when much annoyance is caused by flies. The importers are Alabastine Co. (British), Ltd., Church Street, South Lambeth, London, S.W.

Pettifer's Specialities.

Messrs. Stephen Pettifer & Sons, Malmesbury, Wilts, have received a warrant of appointment as veterinary chemists to King George V., of which they are justly very proud. It may also be taken as an indication of the value of the veterinary specialities which the firm issue, such as Santovin and Santoform, and should indirectly lead to an increase in the sale by chemists of these remedies. A London office has been opened at 11 and 12 Fenchurch Street, and is in charge of Mr. Walter Harrison, who will be pleased to interview home, colonial, or foreign chemists who may be in town.

"Ceregen."

We referred recently to "Ceregen" food and peptonised "Ceregen" food, which are special preparations of John Bell, Hills & Lucas, Ltd., Oxford Works, Tower Bridge Road, London, S.E. The sale of these foods is now very large—an indication that the medical profession and the public are not slow to recognise the value of a well-balanced dietetic article which is sold at a moderate price. The point of this note is that the profit on "Ceregen" and peptonised "Ceregen" is protected at from 40 to 45 per cent., so that the sale is satisfactory to the chemist from the pecuniary side, as well as giving satisfied customers.

Sponge Showcase.

Mr. I. S. H. Benjamin, the Scottish representative of the Cresswell Bros. & Schmitz Branch of the International Sponge Importers, Ltd., has designed a new cabinet for showing sponges. It stands 4 ft. high and is 2 ft. 6 in. broad, and consists of three glazed drawers and an upper cupboard also glazed with bevelled glass. The arrangement allows various styles of sponges to be shown without being soiled by exposure. Figures of the case are given in an advertisement in this issue, and inquirers should address Messrs. Cresswell Bros. at 18-19 Red Lion Square, London, W.C. It may also be obtained from Messrs. Sangers, 42a Hampstead Road, London, N.W.

J. S. W. Preparations.

There is an opportunity for chemists to increase their interest in the series of toilet-preparations produced by J. S. W. Preparations, Ltd., York House, Hurlingham, London, S.W. It appears that the postal business is increasing, whereas it is the desire of the proprietors that the supplies should be obtained locally. Customers are referred to local chemists where possible, but notwithstanding the increasing interest which the trade is taking in these toilet-goods there are some who do not carry even a small stock. This is a pity, because customers like to be saved the trouble of remitting money by post, and the profit is a useful addition to the retailer. A hair-powder and a dental cream have recently been added to the list, but the chief items are still the hair-food and "No. 1315," a non-oily modification of the hair-food.

La Reine d'Egypte.

The latest achievement of the Erasmic Co., Ltd., Warrington, is the production under the above title of a new perfume, "The Queen of Egypt," which is as characteristic in style of get-up as it is as a perfume, the bottle being generous in size and finish. It is a flat bottle with cut-glass stopper, and the perfume is a green liquid of the pleasant and subtle odour associated with the Orient, but we find in this case that the heavy odour obtained by superfluity of patchouli, sandalwood, or kus-kus is quite absent, the scent being of a refreshing nature and well liked by ladies. The company have placed it upon the P.A.T.A. list to retail at 2*s.* 6*d.* per bottle, and the trade price is 21*s.* per dozen. The company also call attention in this issue to the Erasmic Window-display Competition, in which prizes to the value of 115*l.* are offered. The results are to be published in our issue of September 30, and chemists are invited to apply for conditions to the company at the above address.

A Seasonable Article.

The hot weather, according to the prophets, is to continue well over the summer, and mosquitoes, sandflies, midges, and gnats are enjoying themselves. Their attentions are not appreciated by the generality of the public, however, and chemists' customers are clamouring for preventives for insect-bites. One of the most effective on the market is "Muscatol," the anti-mosquito speciality of Mr. F. A. Rogers, 327 Oxford Street, London, W. This article, which (judging by the testimonials Mr. Rogers has shown us) is known and appreciated all over the world, is having a special boom at the moment, and chemists would do well to lay in stocks. Mr. Rogers is prepared to give a dozen sample bottles gratis with every dozen of the 1*s.* size "Muscatol" ordered. These "samples" may sell at 3*d.* each. "Muscatol" is on the P.A.T.A. list, but many chemists will probably not object to another 3*s.* per dozen net profit by the sale of the samples. When ordering "Muscatol" either direct or through a wholesale house, chemists should intimate definitely whether they want a supply of samples or not.

"Infantina."

The Theinhardt's Food Co., 6 Catherine Court, Seething Lane, London, E.C., submit samples of their "Infantina" (Theinhardt's food for infants), which is one of the few dietetics specially prescribed in case of diarrhœa and intestinal catarrh, which is prevalent during this season of the year. We understand that "Infantina" has been on the market for twenty-three years, and that as an adjunct to diluted cow's milk in cases of malnutrition, weak digestion, wasting, and artificial rearing of children it has proved invaluable. "Infantina" is prepared in the main from pure full-cream milk and various dextrinised cereals rich in gluten, with a suitable proportion of milk-sugar. Analysis shows that it contains 16.17 per cent. proteids, and approximates closely to Professor Koenig's "ideal food." The company invite chemists to send for their two interesting booklets, "The Baby in Health and Sickness" and "Advice on Feeding" (the latter for invalids and adults). The preparations are on the P.A.T.A. list.

The 1911 Issue

of the catalogue of druggists' sundries, proprietary medicines, perfumery, and sugar-coated pills, compiled and published by Messrs. F. Newbery & Sons, Ltd., Charterhouse Square, London, E.C., will be ready in a few days. It extends to nearly 900 pages, and is the thirty-first annual issue. We have been accustomed to quote from the preface the statistics given in regard to the proprietary-medicine trade as indicated by this catalogue. We find that this year 454 new entries have been made and 625 of the entries in the 1910 catalogue have been removed, while 708 quotations have been modified. The following paragraph from the preface will be read with interest:

> Advances in the chemical and allied sciences are adding continuously to the number of remedial substances in request by medical practitioners, and a considerable proportion of the additions in the present catalogue are of this nature. Whether the science of medicine, involved in mystery as it has ever been, is the *ars conjecturalis* or not, it is the part of the pharmacist to dispense what the prescription properly calls for, and we hope that the selection of modern prescription-remedies contained in the catalogue will prove of real service to the working pharmacist.

We find that the preparations referred to occupy two pages, and are procurable promptly to order, if not in stock.

The arrangement of the catalogue is as before, and a lot of useful information is given in regard to medicine stamp-duty and the various laws which bear upon the sale of medicines. A copy of the catalogue can be obtained by any of our readers on application to the above address.—When in the showroom of the company the other day a *C. & D.* representative was struck with the apparent popularity of the "Water Baby" loofah and the wide range of seasonable specialities on show, including a miniature cuspidor in aluminium, which invalids can carry concealed in the hand, in the vest-pocket, or in a small bag or purse. In the showroom our representative met Dr. Peter Short, of the Trommer Co., Ltd., who has just perfected a new substitute for otto of rose, which is named "Rosatogen." A complete liquid-air plant has been installed at 27 Charterhouse Square to manufacture "Rosatogen" on a large scale and at a comparatively low price. It is sold in ½-oz. bottles at 4*s.* and in 1-oz. bottles at 7*s.* 6*d.*, with special quotations for bulk quantities. The rose-water made from it is like the water distilled from flowers.

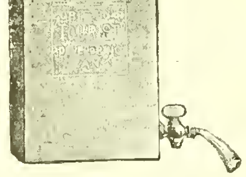
Packed Goods.

We referred last week to the new illustrated list of packed goods which Messrs. Ayrton, Saunders & Co., Ltd., Liverpool, have produced as the "I.X.L." series. We have since had an opportunity of examining the containers and the general style in which such articles as the following are got up: Violet water-softener, cold-cream, witch-hazel snow, carbolic tooth-powder, cream of roses, toilet-paraffin, bath-salts, violet-powder, and bay rum shampoo-powder. The styles are attractive and the labels in every case printed in gold and colours, the designs being as shown in the accompanying illustrations. The products also are good, and Messrs. Ayrton, Saunders & Co. invite correspondence with retailers who desire to make a "hit" in this department.

A Few Sundries.

In the fine showroom of Messrs. F. Schutze & Co., Ltd., Black Bull Works, Market Road, N., the manager (Mr. A. Manks) showed us a number of seasonable lines which are having a large measure of popularity during the present hot weather. These included bathing-caps and sponge-bags in many patterns and styles, as well as safe floats. The "Eversafe" baby-pacificer, introduced two years ago, is now a quick seller, the advantages being that the teat is solid and cannot become detached from the ring. These are put up on cards of a dozen, and retail at from 2*d.* to 6*d.*, being listed at from 15*s.* 6*d.* to 35*s.* 6*d.* per gross. The "Master" feeder and the "Master" safety hot-water bottle are stock lines to which our attention was called, these goods being of British manufacture throughout; the feature of the hot-water bottle is that the stopper, which is a safety one, is made in one piece and is always complete; it has no screw, and opens or closes by merely turning the handle half-way to the right or left, so that it is impossible for the bottle to get out of order. A special department is devoted to transparency printing in colours direct on bottles or pots of glass, china, wood, tin, etc., and some very effective labelling is shown. "Ciola Menthe" is the name of a new hygienic tooth-powder which has been well received, and of which a large display is made in the showroom. It is a high-class dentifrice, and is neatly put up in tins to sell at 6*d.* (3*s.* 6*d.*) and 1*s.* (6*s.* 6*d.* per dozen), with a bonus on three-dozen lots. As proprietors of the Hansa Platz Eau de Cologne and the preparations of Grant et Cie., the company make a large display in their showroom, the original buttermilk soap-balls and lavender-scented toilet-soaps being well in evidence.

Photographic Goods.



We have had an opportunity this week of inspecting the special lines in photographic goods which are marketed by Messrs. John J. Griffin & Sons, Ltd., Kingsway, London, W.C. First of all, there is the series of photographic printing-papers, the two most interesting being the "Goldona" self-toning paper and the "Noctona" gaslight paper. "Goldona" self-toning paper, which only requires fixing and washing, is claimed to be the easiest daylight printing-paper to manipulate, and the ready manner in which good tones are obtained is due, we are informed, to the large proportion of gold incorporated in the emulsion. This paper is issued in two kinds, one designated "mauve label," which gives cold purple and purple-black tones, and the "green label," upon which paper is obtainable any tone from warm brown to chocolate purple. In regard to the "Noctona" gaslight paper, dealers will be glad to know that in these days of multiple brands of photographic papers only three grades are issued. These grades represent the surfaces—pearl matt, glossy, and satin. The makers justly claim that "Noctona" possesses remarkable latitude, it being easy to obtain good results with widely differing exposures. A developer which gives excellent results with this paper is "Mequin," first issued as "M.Q." "Mequin" is a packet developer, nicely put up in tins of six packets, each being sufficient for 4 oz. of developer. The mention of developer reminds us of the "Tourist" developing tank, which should be especially in demand during the holiday season. The leading idea of developing tanks is to simplify the manipulations of photography and so encourage amateurs who take up the hobby to progress in the art. The "Tourist" tank is a well-designed piece of apparatus, and after the plates have been inserted in the rack all the manipulations can be carried out in daylight. The tank is nickel-plated and substantially made, so that it is likely to give satisfaction over an extended period. The last item to which we must refer is the newly introduced "Gramme" plate. This is a very rapid plate suitable for almost any class of work. The "Gramme" plate is packed in boxes of half a dozen, there being a demand in some districts for dry-plates in smaller packages. The box of six plates sells at 6*d.*, the larger sizes at proportional prices. The profit on these goods is liberal, and as care is taken to maintain rigidly the quality dealers may be sure that their customers will remain satisfied users. An attractive series of showcards has been issued with specimen photographs affixed; dealers should make inquiries about these.

Wrigley's Spearmint Chewing-gum is a distinctive line for which Heppells, 38 Chandos Street, London, W.C., are the wholesale agents for this country. It differs from other chewing gums in the persistence of its flavour, which is still evident after continued chewing. A reference to our advertisement columns will show that the product bears a large profit.

Harmless Colours.

In our issue of June 24 we referred briefly to the communication by Dr. Samuel Rideal, printed in "The Lancet," dealing with an investigation of certain substances used in colouring food. These colours were egg-yellow, annatto substitute, and lemon-yellow, manufactured by Messrs. Williams Bros. & Co., Hounslow, Middlesex. Dr. Rideal's investigation arose from an unwarrantable observation at a public banquet in regard to the use of annatto substitute in the preparation of dried fish as well as in oil used for frying fish. Messrs. Williams Bros. knew perfectly well that such use is harmless. Nevertheless, it was deemed advisable to have the statements disproved by scientific investigation, hence Dr. Rideal's experiments. The colours used were Messrs. Williams Bros.' egg-yellow 8113 extra, annatto substitute 22764, and lemon-yellow 11712. In the investigation human male subjects and animals were used, and in his communication to "The Lancet" Dr. Rideal gives full particulars regarding the experiments. He states that egg-yellow is chiefly employed for colouring milk, egg powders, and custard powders. For milk, 1 part in 200,000 is a proportion frequently used, and for custard powder 1 part in 2.000, equivalent to about 1 part in 40,000 of the custard as prepared for the table. Annatto substitute is used for the same purposes as the vegetable colour annatto—*e.g.*, for tinting milk, butter, cheese, haddocks, and other articles of diet. The proportion used for cheese is about 1 in 24,000, annatto substitute having approximately twenty-five times the tinctorial power of the commercial extracts of annatto, of which ½ oz. is added to 30 lb. of cheese. Lemon-yellow is largely used, Dr. Rideal reported, to colour lemonade and similar beverages, a common proportion being 1 part of the dye in 500,000, but we may add that it is also employed for colouring lemonade crystals. The full report occupies about seven pages of "The Lancet." The investigation proved the dyes to be quite harmless and free from toxic properties as well as metallic impurities. They not only do not retard artificial digestion, but do not detrimentally affect natural digestion. Messrs. Williams Bros. & Co. are having an abstract of the communication prepared, which we commend to those who use and sell these colours or preparations of them. It is customary to make from the annatto substitute a solution of 1 lb. in 2 gals. of water as a concentrated solution to be used by fish-curers, for colouring butter, for colouring the oil used by fish-fryers, and by dairymen for tinting milk. Similarly the other colours are prepared by retailers as solutions in water, small proportions of which are used by bakers and confectioners for colouring purposes. There is a good line of business to be done in these preparations, and Messrs. Williams Bros. & Co. give buyers of the colours all necessary information.

SUMMER OUTINGS.

A Round Trip.

The annual outing of the Exeter staff of Messrs. Evans, Gadd & Co., Ltd., took place on Saturday afternoon, July 22, at Budleigh Salterton, where high tea was provided at the Plume of Feathers Hotel. Among those present were Mr. and Mrs. Henry Gadd, Mr. W. J. Wippell, the Misses Margaret Wippell and Catherine Mary Gadd, and Mr. S. C. Gadd. After tea the party left for Exmouth, then drove home *viâ* Topsham, Exeter being reached about eleven o'clock.

Bigbury-on-Sea.

The annual summer outing of the Plymouth, Devonport, Stonehouse, and District Association of Pharmacists took place on Wednesday afternoon, July 19, when a number of the members and their friends visited Bigbury-on-Sea, the new Devonshire holiday resort on the shores of the English Channel. The party travelled by a G.W.R. observation motor-car through twenty miles of most charming scenery, a short break being made at Ringmore, where afternoon tea was provided. On arriving at Bigbury the principal attractions were pointed out by Mr. A. D. Breeze, also the excellent method adopted for obtaining fresh water. Burgh Island was also visited. High tea was served at Warren Cottage at 6.30 p.m. Mr. Breeze asked the company to drink the health of the President (Mr. F. A. Spear), and Mr. Spear humorously replied, and proposed a hearty vote of thanks to the excursion Secretary (Mr. S. A. Perkins), which he acknowledged. The party then inspected some unique bungalows on the shore, and at 8.30 left for Plymouth, which was reached two hours later.

BUSINESS CHANGES.

Notes for this section sent to the Editor should be authenticated, and must not be in the nature of advertisements.

Mr. J. E. Chapman, of Spalding, has purchased, through Messrs. Brett & Co., of Leicester, the business of Mr. A. Oliver, the Park Pharmacy, Wintringham Road, Grimsby.

Mr. J. F. Fowle, chemist and druggist, High Street, Holbeach, has taken over the business carried on until lately by Mr. J. W. Ratcliffe, chemist, at Sutton Bridge.

Mr. Nathaniel N. Armitage, Ph.C., of 114 Tong Road, Leeds, has taken over the chemist's business at 186 Tong Road, Leeds, recently carried on by the late Mr. T. W. Horner.

AT THE COUNTER.

An Edinburgh Chemist received the following order the other day :

bottle Eastons syrup, 7.
2*d.* Irepike.

Hiera picra was given for the second item.

The Correct Mode of addressing his chemist evidently causes considerable cogitation on the part of the South African native. Below is a result of his labours, as sent to Mr. J. E. Miller, of Grahamstown, Cape Province :

Derected to
Master chemest & Druggist
Mr. John Edward Miller
Esq Grahamstown
Please will give
that woman Medisine
of Stuip Droppels
four bottles

A Few of the Puzzling Requests of the Year.—"Reekie nut" is, of course, easily interpreted, even when one does not know the synonym of the city. "One cake of linoleum soap" might almost be regarded in certain quarters as approaching a libellous demand. "A pennywith of Cushie Neil" suggests, if there be such a damsel, a trace of the cannibalistic instinct lying dormant somewhere in the frame of the writer. "How much will these powders be?" asked a gentleman, presenting a prescription. "A shilling," said the druggist. "Thank goodness!" breathed the other. "The doctor has marked 'one qu.i.d.' at the bottom, and I thought he meant that to be the price."

London Day by Day.—A Vauxhall chemist writes saying that the Londoner is as bad as, if not worse than, his country cousin at pharmaceutical spelling, as witness the following examples : "One 1*d.* of flieses of bolshim for pains in the back." "Kursute 2*d.* worth," which might have been a prehistoric form of spelling creasote. "1 peneth of pomegranit of Potash;" "1*d.* Pheznerate of Potash," are artistic variations, while "1*d.* of cantafordit oil" is derogatory to the staple ol. camphoræ. "1*d.* of surup of looloo plese," "1*d.* worth of Corporated Iron," "1*d.* worth of Ikety Pickety Pils," "one penny of Tercuric Acid," and "Biter Halars Pills 2*d.*," are plain-sailing, but on telling a customer that spirit of salt could not be put in a tin can, she seemed annoyed, and retorted "Why can't yer? It's a liquid, aint it?—and I've washed the tin out."

P.A.T.A. Prices.—The following additions have been made to the Protected List during July : Alvexo Elixir, Alvexoids, Brynola, and Umbixa; Eucryl tooth-powder in sprinkler-top flasks; Dr. Pierce's Golden Medical Discovery; Sage's Catarrh Remedy; Thel-tone.

A Year's Work on a Materia Medica Farm.

Mr. W. Cornish.

Mr. WILLIAM CORNISH, of London Road, Mitcham, whose photograph we here reproduce, acted for forty years as manager to a Mitcham firm of medicinal-plant growers. He had 600 acres under his control, and he considers that more extracts of belladonna and hyoscyamus were made from plants produced under his care than by any other living person. Mr. Cornish says that he found that hyoscyamus extract contained a greater percentage of alkaloid if made from a mixture of annual and biennial leaves. The interesting *resumé* below supplied by Mr. Cornish, is of the year's work on a materia medica farm.

January.—If the weather permits, the task of taking up four-year-old liquorice-root is completed. The plant which takes four years to arrive at its maximum growth sends roots down to a depth of four feet. The drying of the root is done between rose bushes.

February.—The runners from the crown of two- and three-year-old liquorice-plants are dug up and taken to the sorting-sheds.

March is a busy month. Pennyroyal must be planted out to be ready for distilling in September, and chamomile for August flowers and September distillation, two varieties of the latter being cultivated for these specific purposes. Poppy-seed is sown to yield poppy-heads in September; also henbane and lovage to plant out in the autumn. Squirting cucumber is planted out for picking the fruits in August. The liquorice-plant runners obtained in February are sorted into two varieties—hard and soft. The latter are cut up and planted on an area of ground equal to that from which liquorice was taken during the winter. The hard variety is cut up and kiln-dried before sending to the drug-grinders. It yields a powder of very fine flavour.

April is given over to keeping weeds down by means of the hoe.

May.—More careful hoeing is necessary with all freshly planted crops.

June.—Belladonna is cut for extract-making. Rose-picking also begins. Damask rose-picking begins at 4 A.M., as the flowers are inferior if allowed to become full-blown. Women cut off the lighter-coloured lower portion of the bud, and the remainder constitutes rose-leaves. The Provence rose is also picked thrice weekly and forwarded to London druggists and perfumers. Any surplus stock is distilled with water to make rose-water. Biennial henbane is also cut for extract-making, and also thyme for distilling.

July.—Horehound, wormwood, and marshmallow are cut for drying.

August is the busiest month of the year, as distillation now begins. Lavender is the first crop distilled for oil, with four distillations in about a fortnight; then peppermint, which, owing to greater bulk, takes a longer time before distillation is complete. Picking of annual henbane (for drying) and of chamomile flowers is commenced. Women and children do this work, being paid by the pound picked. Picking and kiln-drying of these products last on until the latter part of September. The collection of squirting-cucumber fruits for pressing begins in this month.

September.—The pennyroyal, chamomile, and rosemary crops are distilled. Poppy-heads are picked if the weather is fine. Lovage-root is taken up, washed, and dried, while spearmint is distilled later in the month.

October.—The ground is cleared of weeds. Peppermint runners are covered with earth. Young rose-plants are planted out.

November.—Complete rose-planting. As the buds yielded by rose-plants after three years are light and of poor colour, these plants are ploughed up, an equivalent area of ground being planted with the young plants. Belladonna, lovage, and lavender are also planted out now. As after three seasons the blooms yielded by the lavender-plants become poor about a third of the plants are ploughed up each year, as is the case with rose-plants. Rose-bushes are trimmed up and the soil between them dug up.

December.—The task of taking up liquorice-root begins, and as bad weather usually prevails, this work runs over into January.

The staff requisite to manage such a farm numbers about sixty, while three horse-teams and four small cobs (to scarify the surface between the plants in summer) are also required.

SCIENTIFIC PROGRESS.

Temperatures under this heading are on the Centigrade scale.

Hexamekol.—This new remedy is a combination of guaiacol and hexamethylene-tetramine. It forms a white crystalline powder, and contains 65 per cent. of guaiacol. It it strongly recommended in cases of phthisis.

A New Constituent of Angelica Oil.—Bolcker and Hahn, by a series of fractional distillations of essential oil of angelica, have succeeded in isolating a new constituent ("Apotheker Zeitung," 1911, 219). It is a lactone of the formula $C_{15}H_{16}O_3$, melting at 83° and boiling at 250° at 250 mm. pressure. It forms a di-brom addition product, $C_{15}H_{16}O_3Br_2$. On heating with alcoholic potash it gives the potassium salt of the oxyacid $C_{15}H_{18}O_4$.

The Glucosides of Antiaris Toxicaria.—Kiliani ("Berichte," 43, 3574) some time ago separated a glucoside from this plant which he termed antiarine, $C_{27}H_{42}O_{10}$, which yielded a sugar, antiarose $C_6H_{12}O_5$, on hydrolysis. He has now isolated a second glucoside, which he has termed β-antiarine. It forms needles, containing three molecules of water, melting at 206°-207°, and having the formula $C_{27}H_{38}O_{10}$ or $C_{27}H_{40}O_{10}$.

A New Glucoside.—Bourquelot ("Journal de Pharmacie," 1911, 607) has examined the glucoside extracted from the so-called "water-clover," *Menyanthes trifoliata*, which he has termed meliantin. It forms anhydrous crystals, melting at 223° and highly lævorotatory, −81.9°. It does not reduce Fehling's solution. It is hydrolysed by emulsin or by dilute mineral acids, and then yields ordinary *dextro*-glucose. It has the formula $C_{15}H_{22}O_9$.

Examination of Bismuth Salicylate.—According to Caron and Raquet ("Am. Chim. Anal.," 1911, 177), the diphenylamine test for the presence of subnitrate is best applied as follows: A small quantity of the sample is dissolved in warm 10-per-cent. sulphuric acid, and the cooled liquid filtered to separate salicylic acid. To 1 c.c. of the filtrate 2 c.c. of a dilute solution of diphenylamine sulphate in 10-per-cent. sulphuric acid is added. If pure sulphuric acid be now poured down the side of the tube a blue colour is produced at the contact zone. Or a little of the sample is treated with pure H_2SO_4, the liquid diluted, and ammonia added. A yellow colour appears in the presence of nitric acid.

The Principles of Erythræa Centaurium.—Reis ("Journal de Pharmacie," 1911, 357) has studied the principles of this plant, which is used on the Continent to a considerable extent in the form of an extract. He has isolated therefrom a body, which he terms erythrocentaurin, which crystallises in colourless prisms, melting at 145°, and which has the formula $C_{10}H_{10}O_3$. It is a bitter substance of indefinite nature. He has also isolated a glucoside, which he terms erytaurone, which is probably a lactone of the formula $C_{10}H_{10}O_{4}$, melting at 225° to 227°. He has also separated a phytosterin, $C_{26}H_{34}O$, melting at 79°, ceryl alcohol, and stearic and palmitic acids.

Senecio Alkaloids and Cattle-poisoning.—Professor A. R. Cushny, in a communication to the Royal Society on June 5, reports that various species of *Senecio* (ragwort) have been shown to induce fatal poisoning in cattle and horses in South Africa, Canada, and New Zealand. The alkaloids of one of these species were isolated by Watt, and their pharmacological examination shows that they induce the same symptoms as the entire plant. The *Senecio* species in this country proved non-toxic, except the common groundsel (*S. vulgaris*), and extracts from the ragwort grown in Canada, where the plant is poisonous, proved devoid of action also

PHOTOGRAPHIC NOTES.

By a Pharmaceutical Camerist.

Plate Speeds.

Mr. Alfred Watkins, in a paper before the Photographic Convention, deplored the undue multiplicity of brands of plates. He claims that "English plate-makers, who make the best plates in the world, would gain in dignity and simplicity by a drastic overhaul of their lists of brands." Dealers who have practical experience in the difficulties of stocking dry-plates will be inclined to agree with Mr. Watkins.

Acid Bisulphite Lye

is an ingredient in some of the formulæ issued by Lumière. When acid bisulphite lye is not obtainable, states "Photography," the equivalent may be made by dissolving 10 oz. of sodium sulphite in 20 oz. of warm water. When cool, $1\frac{3}{4}$ oz. of pure sulphuric acid is added. The resultant solution will contain an amount of acid bisulphite corresponding to 11 fl. oz. of acid bisulphite lye. In other words, one will have to use this solution at the rate of about 2 oz. for every ounce called for of the acid bisulphite lye of the formula.

Sulphocyanide Intensifier.

Mr. J. B. B. Wellington, President of the Photographic Convention, read a paper at the Portsmouth meeting, in which he gave a new formula for an intensifier for dry-plates. The film is first hardened by immersion in a formalin bath (formalin 1, water 10) for five minutes, rinsed, and placed for exactly one minute in either of the following, the bichromate being recommended by preference :

(1)	Potassium ferricyanide	20 grains
	Potassium bromide	20 grains
	Water	20 oz.
(2)	Potassium bichromate	1 grain
	Potassium bromide	20 grains
	Hydrochloric acid	60 minims
	Water	20 oz.

The negative is rinsed and then placed in the intensifying solution. The latter is made up in the form of two stock solutions, which will keep good for years :

A.	Silver nitrate	800 grains
	Distilled water to make	20 oz.
B.	Potassium sulphocyanide ...	1,400 grains
	Sodium hyposulphite	1,400 grains
	Water to make	20 oz.

To $\frac{1}{2}$ oz. B add $\frac{1}{2}$ oz. A and stir vigorously, add 1 dr. of 10-per-cent. pyro solution preserved with sulphite, and 2 dr. of ammonia (10 per cent.). This is poured over the negative, and as soon as sufficient density is acquired it is transferred to an acid fixing-bath until the slight pyro stain is removed and the negative finally washed, using a tuft of cotton-wool to remove any surface deposit which may have formed.

Film-stripping.

The following method of stripping the film from a negative was first published by Mr. J. Sterry in "Photography," and has been found by other workers to be quite satisfactory. The film must not be washed before stripping. The plate is immersed for half an hour in a stock solution composed of 1 oz. of a 50-per-cent. solution of potassium carbonate, $\frac{1}{2}$ oz. of glycerin, $\frac{1}{2}$ oz. of strong commercial formalin (40-per-cent.), and 25 oz. of water. It is then drained for a few minutes, and the surface moisture is wiped off with an old cambric cloth in the form of a pad. The plate is then allowed to dry slowly, and when quite dry the film is cut through with a sharp knife all round, at about $\frac{1}{8}$ in. from the edge, when it will peel off quite easily.

MEDICAL GLEANINGS.

Burn-dressing.

Ohleyer, in the "Apotheker Zeitung," states that he has seen a case of severe burns treated very successfully with a dressing of carbonate of magnesia. Night and morning the part is sprinkled with a fairly thick layer of carbonate of magnesia covered with gauze and cotton-wool, and maintained in position with a bandage. When renewing the dressing, gauze adhering to the wound is removed by moistening with lysol solution (1-1,000). The author attributes the beneficial effects of the magnesia to its absorbent properties and its alkalinity (which neutralises the muscle acids).

Novocaine Solutions.

It is stated by Löwen ("Apoth. Zeit.") that bicarbonate of novocaine in solution produces a better anæsthesia which lasts longer than in cases where the chloride alone is employed. The author mixes the powders together and dissolves them in sterilised water, adding a few drops of adrenalin solution if desired. The powder for a 1-per-cent. solution of bicarbonate of novocaine is given as follows, the powder being dissolved in sufficient water to make 100 c.c. :

Pure sodium bicarbonate	0.25
Sodium chloride	0.50
Novocaine chloride	1.00

Salicylic-acid Solution.

Lafay, in "La Clinique," calls attention to the comparative insolubility of salicylic acid and the inconvenience that results when prescribers order the acid in lotions and gargles in an amount that cannot be retained in solution. The difficulty is overcome, states the author, by using equal parts of salicylic acid and borax, the boro-salicylate of soda formed being very soluble in water and it does not require the addition of alcohol or glycerin.

The Absorption of Iron.

Dr. D. G. McLeod Munro, Cheltenham, contributes to the "British Medical Journal" the result of a research he has been making with a view to assisting in the settlement of the still vexed question of the relative absorbability of the inorganic iron salts and the so-called organic preparations in cases of chlorosis. Ferroglidine was taken as a standard, the dosage of the other preparations being based on its iron-content. The following table shows the results attained :

	Ferroglidine		Blaud's Pill		Ammonio-cit. of Iron		Hæmatogen	
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
Red-blood corpuscles ...	3,400,000	4,272,000	3,800,000	3,848,000	3,808,000	3,844,000	3,042.000	3,820.000
Hæmoglobin ... per cent.	70	88	70	72	70	75	45	76
Iron in fæces—								
(i) Fresh ... per cent.	0.0028	0·031	0·0031	0·075	0·0016	0·163	0·0020	0·014
(ii) Dry ... per cent.	0·0097	0·112	0·010	0·218	0·0090	0·815	0·0082	0·048

(*a*) Before treatment. (*b*) After treatment for a month.

These results, therefore, and the other cases under treatment, so far as they have gone, would seem to show that small doses of the organic preparations of iron, as tested against equal doses of the most commonly used and trusted inorganic salts of iron, are absorbed in much greater proportion to the total given per diem.

NEW BOOKS.

Any of these books printed in the United Kingdom can be supplied, at the published price, to "C. & D." subscribers on application (with remittance) to the Publisher, 42 Cannon Street, London, E.C. These notes do not exclude subsequent reviews.

Albe, E. E. Fournier d'. *Contemporary Chemistry: a Survey of the Present State, Methods, and Tendencies of Chemical Science.* $7\frac{1}{2} \times 4\frac{3}{4}$. Pp. 196. 4*s*. net. (Constable.)

Boldman, C. F. *Immune Sera: a Concise Exposition of the Main Facts of Infection and Immunity.* 4th edit. Cr. 8vo. 6*s*. 6*d*. net. (Chapman & Hall.)

Fritsch, J. *Manufacture of Chemical Manures.* $8\frac{3}{4} \times 5\frac{1}{2}$. Pp. 320. 10*s*. 6*d*. net. (Scott, Greenwood.)

Gardette, V. *Formulaire des Spécialités Pharmaceutiques pour 1911.* $6\frac{3}{8} \times 4$. Pp. 392. 3 fr. (Baillière, 19 Rue Hautefeuille, Paris.) [The purpose of this book is to indicate the approximate composition of the numerous pharmaceutical specialities which are offered by French pharmacists. This is done in a general manner by stating the amount of active ingredient in each dessertspoonful, or the chief ingredient; *e.g.*, neuro-iodure contains potassium iodide 33 cg., and calcium glycerophosphate 15 cg., in each dessertspoonful. Nosol is a liquid with a basis of adrenalin. The uses and doses are also given. Other sections of the book give the names and addresses of the various proprietary articles and an index of the names of the various specialities in alphabetical order.]

Griffiths, Waldron. *The Principal Starches Used as Food.* 2nd edit. $7\frac{1}{2} \times 4\frac{1}{2}$. Pp. 70, with photo-micrographs. 6*s*. net. (Baily & Woods, Cirencester.) [The author of this book is a pharmacist and an accomplished microscopist, the illustrations in the book being from micro-photographs taken by himself. These illustrate well the main characteristics of the various starches, and as the magnification (150 diameters) is the same throughout, they form a useful basis for comparison. The following food-substances are dealt with: Arrowroot (Bermuda, St. Vincent or West Indian, Madagascar, Natal, and Tahite), barley, canna indica, canna edulis, ginger, ground nut, haricot-bean, Indian millet, lentil, maize, oat, pea, pepper, plantain-meal, potato, fruit of potato, rice, rye, sago, tapioca, and wheat.]

Rittenberg, M. *Selling Schemes for Retailers.* $7\frac{1}{2} \times 4\frac{3}{4}$. Pp. 188. 1*s*. (Routledge.)

Strasburger, E. *Handbook of Practical Botany.* 7th ed. $8\frac{3}{4} \times 5\frac{1}{2}$. Pp. 560. 10*s*. 6*d*. (G. Allen.)

Thorpe, Sir Edward. *Essays in Historical Chemistry.* $9 \times 5\frac{3}{4}$. Pp. 614. 12*s*. net. (Macmillan.)

Tschirch, A. *Handbuch der Pharmakognosie.* Parts 22 to 25. M.2 each. (C. H. Tauchnitz, Leipzig.) [These parts include pages 193 to 448 of the second volume of this splendid work. Like the other parts, these are copiously illustrated and deal with the articles of the materia medica in a detailed manner.]

Wadmore, J. M. *Elementary Chemical Theory.* $7\frac{1}{2} \times 4\frac{3}{4}$. Pp. 288. 3*s*. 6*d*. (Methuen.)

Walker, A. H. *Inspection of Fish, Poultry, Game, Fruit, Nuts, and Vegetables.* $8 \times 5\frac{1}{2}$. Pp. 192. 5*s*. net. (Baillière.)

REVIEWS.

Aide-Mémoire et Formulaire Trimestriel. Par R. Gattefossé. Third Edition. $7\frac{1}{2}$ in. by 5 in. Pp. 110. 1.25fr., paper covers; 1.75fr. bound. (Lyons, 1910: "La Parfumerie Moderne," 19 Rue Camille.)

A Little Book for perfume-manufacturers which deals with the subject in the following divisions: (1) Essential oils—characters, analysis, and solubility; (2) synthetic perfumes—classification, composition and fixing agents; (3) basis materials, (4) practical perfumery, (5) soap-making, (6) formulary, (7) liqueurs and flavourings, (8) alcoholmetry, etc. The chief point about the book is the employment of artificial perfume agents and terpeneless oils. The synthetic perfumes are classified under the following heads: (*a*) those which are constituents of essential oils, (*b*) constituents of essential oils chemically altered, (*c*) chemical perfumes identical with natural products, (*d*) new odours, (*e*) mixed artificial perfumes. Examples of the last-named group are:

Aubépine.—Anisic aldehyde, 70; geraniol, 30.

Eglantine.—Anisic aldehyde, 50; geraniol, 30; jasmin, 10; rhodinol, 10.

Heliotrope.—Vanillin, 40; coumarin, 30; heliotropin, 30.

Lilac.—Terpineol, 80; phenyl acetic aldehyde, 8; methylene anthranilate, 12.

Œillet.—Eugenol, 20; terpineol, 30; isoeugenol, 20; cheiranthin, 20; coumarin, 10.

Trèfle.—Isobutyl salicylate, 60; linalyl acetate, 9; chrysol, 9; mousse de chêne, 8; ylang-ylang, 8; rhodinol, 6; vanillin, 6.

These are diluted with alcohol to make essences. Special brands of synthetics are intended to be used.

Handbuch der Drogisten-Praxis, ein Lehr- und Nachschlagebuch für Drogisten, Farbwarenhändler, u.s.w. Von G. A. Buchheister. Tenth edition, by Georg Ottersbach. Part I. $9\frac{5}{8}$ in. by $6\frac{1}{4}$ in. Pp. 1,248. 389 illustrations. 12m. in paper covers, 13.40m. bound. (Berlin, 1911: Julius Springer, 3 Monbijouplatz.)

The issue of a new German Pharmacopœia has rendered necessary a fresh edition of Buchheister's "Druggists' Handbook," although the ninth edition was only brought out two years ago. The opportunity has been taken to correct and extend the scope of the work. The ninth edition consisted of 1.115 pages and 352 illustrations, against 1,248 pages and 389 illustrations in the present work. As an example of the improvements effected may be noted the placing in the group of inorganic chemicals of the substances, such as kieselguhr, plumbago, and gypsum, formerly enumerated in a special chapter entitled "Materials from the Mineral Kingdom." Additional illustrations have been incorporated, the author explains, because it is often easier to convey impressions by picture than by letterpress. The book is a favourite one with German druggists because of the fact that it deals with both the commercial and scientific sides of the trade, while side-lines, such as photography and the sale of colours, paints, and varnishes, receive ample space.

Triumphs and Wonders of Modern Chemistry: A Popular Treatise on Modern Chemistry and its Marvels, written in Non-technical Language for General Readers and Students. By Geoffrey Martin, B.Sc. Lond., M.Sc. Bristol, Ph.D. Rostock. 8 in. by 5 in. Pp. 358. 7*s*. 6*d*. net. (London, 1911: Sampson Low, Marston & Co., Ltd., 100 Southwark Street, S.E.)

This book differs from many chemical treatises which come under our notice from the fact that it is not written as a text-book for students nor as a reference-work for experts. The purpose is to give boys and girls and intelligent inquirers of mature age an insight into the modern theories and discoveries of chemistry, and to give it in non-technical language. In our view the book succeeds well in its purpose, and the fact that it is written by a well-qualified author who shows a broad-minded regard for the opinions of others, and does not hesitate to quote the views of experts on particular points, makes the book remarkably useful. It is one which may be trusted to fire any latent ambition in an embryo chemist, and to older persons it gives a truthful and easily followed account of chemical science. It is divided into fifteen chapters, dealing with such subjects as "The Mystery of Matter," "The Underworld of Atoms," "The Wonders of Chemical Change." As an example we may summarise the hydrogen chapter. There one gets the early history of the element and the methods of preparation; the author then branches off into some interesting details regarding explosions which have resulted through disengaged hydrogen when iron is quenched in water, and a case is given of a disastrous explosion on a warship which was traced to fragments of zinc carelessly left in a boiler. Prout's hypothesis of the elements is skilfully brought in here, and an idea of the immense quantities of hydrogen in other worlds is conveyed by information regarding hydrogen flames in the sun which have been observed to tower aloft to a height of over 350,000 miles. The use of hydrogen for balloons gives an opportunity to tell of balloons, and the effect of rarefied air. Dewar's and Onnes' work in liquefying and solidifying the gas is dealt with, and the chapter winds up with some observations on the structure of the hydrogen atom according to the modern electronic theory. The book is well illustrated.

What is White Pepper?

By Ernest J. Parry, B.Sc., F.I.C.

A RECENT case reported in this journal has brought the question as to what is white pepper into some prominence. Several cases of prosecution for the sale of white pepper containing some husk have taken place in the North of England, and convictions have sometimes resulted; and as regards the others in which the summonses were dismissed, I need say no more than that the doubts expressed regarding the analytical factors justify special reference to the subject here, as one which is of some importance to wholesale and retail druggists.

Peppercorns are the fruit of the pepper plant. In their natural condition, as imported into this country, they are of a dark, practically black, colour. They are gathered directly the first signs of ripening are noticed. It appears to be the fact that when the fruits are full ripe, the greater portion of the pericarp is easily removed, and the ripe fruits deprived of most of the husk are the "white" peppercorns imported into this country. It is not possible to directly estimate the amount of husk. A determination of the fibre can be made, and deductions, more or less accurate, drawn from this determination. The fibre is determined as follows:

Two grams of the finely powdered sample is boiled under a reflux condenser for thirty minutes with 200 c.c. of dilute sulphuric acid (2.5 c.c. of strong acid in 200 c.c. of water). It is then filtered, the insoluble matter washed with water, retransferred to the boiling-flask, and boiled for thirty minutes with 200 c.c. of 1.25-per-cent. solution of potassium hydroxide. The insoluble fibre is now filtered off, washed, dried, and weighed. It is then ignited and the ash deducted from its weight.

I have examined numerous samples of both black and white peppercorns as imported, and find the following as the results of my analyses:

Black peppercorns contain from 14 to 20 per cent. of fibre.

White peppercorns (as imported) contain from 3 to 6 per cent. of fibre.

It is probably on such facts that prosecutions have been initiated. Further, the United States Food and Drugs Act of 1906 is supplemented by an Appropriation Act of the Department of Agriculture, which empowers the Secretary of Agriculture, in collaboration with the Association of Official Agricultural Chemists, to fix standards for foods, and decide what constitutes adulteration. They, in their wisdom, have dealt with questions of *quality* rather than *purity*, and have laid down 5 per cent. of fibre as the maximum limit for white pepper. The interference with the public taste of the American Food and Drugs Act, in forbidding, for example, the sale of essence of vanilla below a certain strength, etc., is well known; but as a rule it has not been contagious so far as this country is concerned. In regard to pepper, however, a few analysts appear to have adopted the American standpoint.

It appears to have been overlooked that there is quite another white pepper on the market than that resulting from grinding the imported, partly decorticated peppercorns above mentioned. Or, if it has not been overlooked, then, in some cases at all events, trade rivalry must be assumed as the motive which instigated some at least of the earlier prosecutions. Quite a number of the largest and most reputable spice-grinders prepare white pepper by decorticating to a greater or less extent the black peppercorns as imported. This requires extensive machinery, and all pepper-grinders do not possess it. In the manufacture of such white pepper, when the very palest variety is required, the whole of the pericarp is taken off, leaving nothing but a trace of the husk in the ground pepper. Where such pale varieties are not wanted more of the pericarp is left on, the outer or black husk being always stripped off. It is this class of pepper which has been attacked. It has never been suggested that it contained anything but pepper, and the manufacturers claim, and rightly claim, to be entitled to grind just those portions of the peppercorn which will yield what is to the senses a white pepper—that is, a pepper of pale colour. Against this, we are told, "You mustn't judge a pepper by what it looks like—whether it's white or not is a question of analysis. If the fibre exceeds so much, it is not white, whatever it may look like"!

Before dealing with actual figures, I would point out that the statement that "white pepper should contain no husk" is not justified by any authority. Pereira (vol. II., I., p. 385) states that "White pepper is the fruit deprived of the external fleshy portion of the pericarp." Wynter Blyth says, "White pepper is the ripe fruit of the same plant; the berries are soaked in water and then most of the dark pericarp is rubbed off. All the structures belonging to the pericarp are not detached, the skins separating at the fibro-vascular zone." These authorities can be multiplied—indeed I know of no authoritative work which supports the statement that white pepper contains no husk.

The percentage of fibre present in white pepper obviously varies according to the amount of pericarp left on, and is generally inversely proportional to the price. I have during the past three months examined thirty samples of white pepper obtained (1) from pepper-grinders of repute; (2) from retail shops; and (3) from whole pepper obtained from Mincing Lane brokers. These samples gave the following results on analysis:

(A) Whole peppercorns (as imported) ground (six samples):

Fibre	3.0 to 6.0 per cent.
Ash	1.5 ,, 3.3 ,,
Ash soluble in H_2O	0.2 ,, 1.0 ,,
Ash insoluble in HCl	0.3 ,, 0.7 ,,

(B) Ground white peppers with fibre below 5 per cent. (eight samples):

Fibre	3.9 to 4.8 per cent.
Ash	1.6 ,, 2.9 ,,
Ash soluble in H_2O	0.25 ,, 0.8 ,,
Ash insoluble in HCl	0.3 ,, 0.8 ,,

(C) Ground white peppers with fibre between 5 and 7 per cent. (nine samples):

Fibre	5.4 to 7.0 per cent.
Ash	1.6 ,, 3.0 ,,
Ash soluble in H_2O	0.3 ,, 0.8 ,,
Ash insoluble in HCl	0.3 ,, 0.79 ,,

(D) Ground white peppers with fibre above 7 per cent. (seven samples):

Fibre	7.3 to 11.0 per cent.
Ash	1.9 ,, 3.1 ,,
Ash soluble in H_2O	0.3 ,, 0.7 ,,
Ash insoluble in HCl	0.4 ,, 0.9 ,,

I cannot see any logical reason why a fibre standard should be fixed for white pepper, but, if so, it must obviously be a far higher one than the 5 per cent. which appears to be that suggested by the public analysts who have condemned this type of pepper.

The following figures are those of various analysts, which, taken collectively, support this contention very strongly:

Fibre Limits Suggested for White Pepper.

Burcker	up to	6.08 per cent.
Richardson	up to	8.0 ,,
Winton (for the whole imported peppercorns)		4.25 ,,
Doolittle		7.65 ,,
Stock		9.6 ,,
Heisch		6.7 ,,
Rabourdin		17.5 ,,
Stokes		13.8 ,,
Moor and Pearmain		9.5 ,,

Probably Rabourdin's and Stokes's results are not comparable with the others, as I believe they only used the acid boiling, not followed by treatment with alkali. But if any standard is to be fixed for white pepper, it surely would be advisable to merely require that the outer layers of black husk should be removed. A microscopic examination will yield far better information than the fibre determination in this respect.

The pericarp of the peppercorn is composed of at least six well-marked series of cells. In the three outer layers there occur two well-marked elements—stone cells of certain shape and dimensions and spiral vessels. In the under layers of cells stone cells are also found, but they are of a different shape from those of the outer layers, being more or less of a horseshoe shape. If the typical elements of the outer layers—that is, the stone cells not of a horseshoe shape and the spiral vessels—are absent, it is safe to say definitely that the outer dark part of the pericarp has been removed. After examining the whole of the figures, I think that it is reasonable, if any standard (other than the requirement that it shall be pure pepper, and white to the senses) be demanded, that of Moor and Pearmain should be accepted—namely, in their own words:

> "We may regard those samples as genuine which fulfil the following conditions:
>
> "Black pepper, not exceeding 7.0 per cent. ash, 10 to 18 per cent. fibre.
>
> "White pepper, not exceeding 3.0 per cent. ash, 3.5 to 9.5 per cent. fibre,
>
> provided that the microscopic appearance is normal."

Dispensing Notes.

By Chas. E. Dodsley.

In some pharmacies where a fair amount of dispensing is done, no record whatever of the work is kept. Now one would think from the nature of the craft all pharmacists would become habitually methodical. That many are not so, especially in book-keeping, is generally supposed, but the keen competition of late years has made it incumbent upon everyone to keep an eye not only on the Cr. and Dr. sides of their bank-book, but also on the purchase and sales columns and profit and loss account in their trading ledger. Why should not the same care and method be used in the most lucrative department, and that phase of one's calling for which special training and subsequent qualification has been undertaken?

The purpose of this short article is to give the best method for easily and correctly recording all dispensing done. The chief point of advantage is that in one book you have every separate item dispensed as mixtures, pills, lotions, powders, cachets, paste, creme, liniment, capsules, ointment, confection, etc., with date, price, note of additional items, which is a check on the entry in the day-book. I have seen a number of ways of recording; the following is the method I have adopted for some years. The appended extracts from my current D.R.B. (Dispensing Record Book) will readily show the advantage of such a system.

Immediately a prescription is presented or 'phoned, an entry is made in the D.R.B., whether repeat or new prescription; in the latter case it is then copied into the Prescription Book proper, and dispensed in due order. Additional items ordered at the same time are, of course, entered in the day-book, or if paid for, on the order-sheet. The D.R.B. is entered up after each spell of work or at the close of the day. The books I use for this purpose are ordinary cheap day-books, having single cash columns. In Example No. 1, "a" placed after a name indicates an addition noted on the prescription, as for instance where a vaporiser is ordered with a solution for spraying the throat, or Sanitas, Brand's essence, enema, etc.; this forms a double check on the entry in day-book. "E" and "P" indicate respectively entered in day-book and paid at time. At the end a permanent record is kept as Example No. 2.

Some may say, "What a waste of time!" Try it, and you will find that, like keeping the Prescription Book indexed up, it will prove a great saving of time, and, furthermore, is often a powerful silent witness to your clients. At any time you may show them the day and time any prescription was dispensed and how often repeated without any fuss or reference to other books.

Example No. 2.

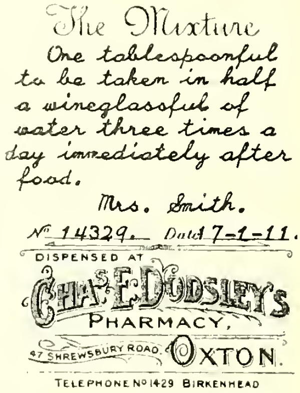
Year	1910				1911			
Month	N.	R.	Total	Amount £ s	N.	R.	Total	Amount £ s. d.
January	259	134	393	20 10	300	200	500	27 9 6
February	280	180	460	25 15				

Example No. 1.

Date	Name		No.	Item		Price s. d.
Nov. 16	Smith		12804	lot.	E	1 0
	,,		12686	Mist.	E	1 6
	Brown		12637	M.	P	1 4
	Jones		9081	tab.	E	10
	Robinson	(a)	12805	M.	E	1 6
	,,		10424	Cac.	E	3 6
	,,		12806	pil.	E	1 6
	Green		12611	M.	E	1 6
	Smith		12807	M.	E	1 9
	Brown		12809	tab.	P	1 0
	Jones		5320	M.	E	1 4
	,,		12752	lin.	E	2 0
	Robinson		12331	pil.	E	1 6
	Green		12810	cac.	E	8
,, 17	Green		12811	M.	E	1 6
	,,	(a)	12812	spray	E	2 6
	Smith		11137	ung.	E	9
	Brown		12490	pulv.	P	3 0
	Jones		12813	M.	E	1 4
	Robinson		12814	M.	E	1 10
	Green		12322	caps.	E	3 6

The advantage of such a record as above is obvious.

The following may not be altogether new, but I do not know any pharmacist who has altogether adopted the typewriter for directing his labels in dispensing. It is an innovation, but also an advance, as much as gummed and printed labels were over the old style, tied around the neck of the bottle. It was the new script type that decided me to make the change; and I am well satisfied that I have done so. Compared with the corresponding periods of any previous years, my dispensing records, since adopting typewritten labels, show an appreciable increase. There are many advantages it is not necessary to enumerate which will occur to the reader, not the least being uniform legibility. Having once adopted the system of typed labels in the dispensing department, let them all be typed always, with the exception of small pill circles—which I don't think any machine is able to manipulate—and on Sunday and after closing hours. Note the uniformity and the *recherché* effect of a script type-written label as compared with the varieties one gets in handwriting.


The Mixture
One tablespoonful
to be taken in half
a wineglassful of
water three times a
day immediately after
food.
Mrs. Smith.
No 14329. Dated 7-1-11.
DISPENSED AT
CHAS E. DODSLEY'S
PHARMACY,
47 SHREWSBURY ROAD, OXTON.
TELEPHONE No 1429 BIRKENHEAD

"A Retrospective Prophecy."

(After Thos. Campbell.)

On Bloomsbury, when the sun was low,
Untrodden lay the *locus quo*;
Exams are held, and, high and low,
Silence was king in majesty.

But Bloomsbury saw another sight
When the bells rang at morning light,
Commanding students forth to fight
The grim-visaged examiners!

On, on they came: some ploughed before,
And some the hope of victory wore;
Most all the lust of battle bore
To join the dreadful revelry!!

Few, few shall pass; those students fair
The "funking form" again shall bear,
And many a truly British swear
Shall rend the air at Bloomsbury!!!

Chem. (55/65.)

The Window-dressing of To-day.

By A. Mortimer.

The shop-window is the chemist's best business asset, as by its means the public form their impression of himself. If he be neat, ingenious, accurate, and possess a host of other good qualities, his window will be a true mirror; so also it will reflect the opposite if he lack these virtues. The public must judge by externals, and it thus behoves the pharmacist to make the best appeal he can to that judgment. Window-dressers, whether born or manufactured, are certainly paid, and paid well, many a business having been built up on its window-displays. To succeed in business one must attract the attention of the prospective customer. This can be done by exciting curiosity, or by compelling inspection of goods through sheer attractiveness. The former is usually cheaper, but the latter produces greater and more lasting effect upon the sales. The best window-displays combine both ideas, a conspicuous object or objects first catching the eye and the character of the articles or the mode in which they are displayed, being such as to induce the passer-by to become a customer. A good example of guiding and concentrating attention to a central object is seen in the first photograph. An excellent illustration of the intense power of human curiosity is given by the window sketched below, which proved to be one of the finest "draws" the writer ever experienced.

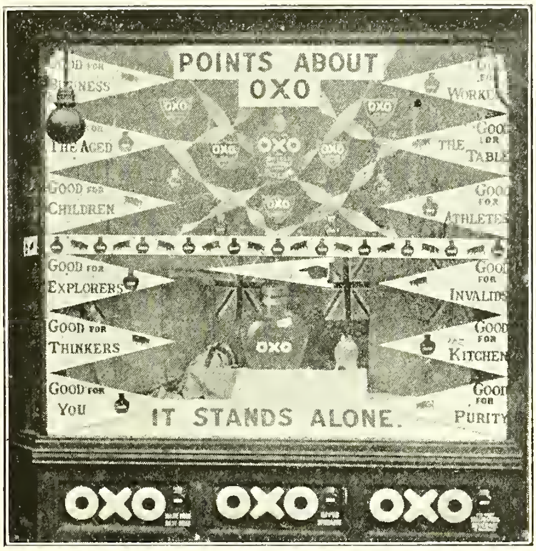


Fig. 1.

The window-pane was whitened (with whiting) all over except for five eyelet-holes, of which the two lower were for children. Across the top was placed an inscription, "For Men Only." Inside the window a single special line of articles to suit ladies was exhibited with a showcard, "A Suitable Present for a Lady." As a matter of fact, men could hardly get near the window for women, and although the cost of the display was very small, the results it yielded in sales were splendid. In compelling attention it is best to aim for him who runs, by making at least one article or showcard particularly prominent. The best positions in a window are on a level with the eye, and in this connection it should be noted that the modern window is too near the ground, the floor and the first shelf being generally wasted from a business point of view. A false bottom obviates this by raising the display some ten or more inches, thus providing also a sloping front where showcards and wording can be used with advantage (see fig. 3). It is a wise rule to show only one thing at a time—*i.e.*, a single line of articles, or at most one class of goods. Many really fine displays are spoiled by leaving diverse impressions instead of concentrating attention. The time intervening between changing displays is highly important, my own practice being to dress the window fortnightly. It means a lot of work, but the advantages are many. Here are some of the compensations:

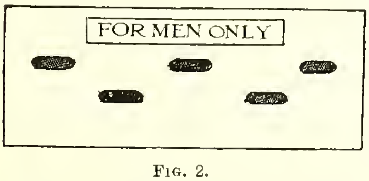


Fig. 2.

The goods are less soiled and faded; in fact, no goods, with care, need be unsaleable after but two weeks' display.

More goods can be shown in the course of a year, and undoubtedly more goods shown yield more sales.

People get into a habit of looking at the display; they talk about the shop and its proprietor. This personal advertising is good and cheap.

Two other maxims are: Never to allow the window to stand empty; and Always price everything. The goods and window trimmings for the next display can be prepared before stripping the window. A completely dismantled window has a tendency to drive away customers, but once the dressing has re-commenced the building-up process again arouses curiosity and attention. In regard to prices, the prospective purchaser may take the trouble to ask the price of an unticketed article, but he is more frequently deterred from doing so through fear that it may be higher than he cares to afford. One ought to show all profitable lines in the window at least once a year. My own plan is after the fortnightly change of window-show to display the goods taken from the window on the counter for a week to a fortnight afterwards. The resultant sales are often even better than during the window-display, thus giving evidence that a repeated impression (especially if in another form) pays. So as not to forget anything and to prevent any overlapping, I use a window-calendar as a guide, but not necessarily following it closely. It is given below, as it may afford useful guidance to other chemists.

January.

Winter Wants.
- Chest Protectors.
- Cottonwool, Gamgee, etc.
- Cough-mixtures.
- Liquorice.
- Linseed.
- Linseed Meal.

February.

Cheap Toilet Soap, Nail Brushes, etc.
Household and Toilet Ammonia.
Hot-water Bottles.
Meat Extracts and Essences.

March.

Toilet Preparations.
- For Skin (cream, soap, lotion).
- For Hair (lotion, brilliantine, bay rum, pomade, etc.).

Spring-cleaning Goods.
Easter Window (Perfume, etc.).
Photographic Goods.

April.

Spring Medicines.
- Blood Purifier.
- Sulphur Tablets.
- Brimstone and Treacle Tablets.

Disinfectants and Insect Powder.
Own Tonic.
Liver Mixture and Pills.

May.

Magnesia and Salines.
Scissors, Pocket-knives, Manicure, etc.
Invalid and Surgical Requisites.
Own Corn Cure.

June.

All Baby Goods.
Photographic Goods.
Quinine Wine.
Straw-hat Cleaners and Cloth Balls.

July.

Oatmeal Soap.
Hospital Carnival.
Foot Powder.
Tooth Brushes and Dentifrice.

August.

Everything for the Holidays.
- Combs.
- Brushes (Hair, Nail, Tooth, etc.).
- Bathing Caps and Bath Gloves.
- Smoked Glasses, etc.
- Cameras, etc.

Sponges.
Shampoo Powders.

September.

Own Baby Foods.
Own Syrup of Figs.
Parrish's Food.
After-holiday Tonic.

October.

Winter Season Commences.
- C.L.O. Emulsion.
- C.L.O., Malt Ext., Malt and Oil.
- Cough-mixtures.
- Liniments and Eucalyptus, etc.

November.

Best Toilet Soaps.
Shaving Brushes, Soaps, and Razors.
Smelling Salts, Cologne, etc.
Dispensing Department

December.

Pastilles, Sugar Candy, etc.
Own Cough-lozenges, etc.
Honey, Neuralgia and Influenza Cures.
Christmas Presents (Perfume, etc.).

Window-trimmings.

Crêpe (crinkled) paper and art muslin are most useful adjuncts. The "Harlene" window-display reproduced below may be used as an illustrative example of window-dressing, in which paper was freely used.

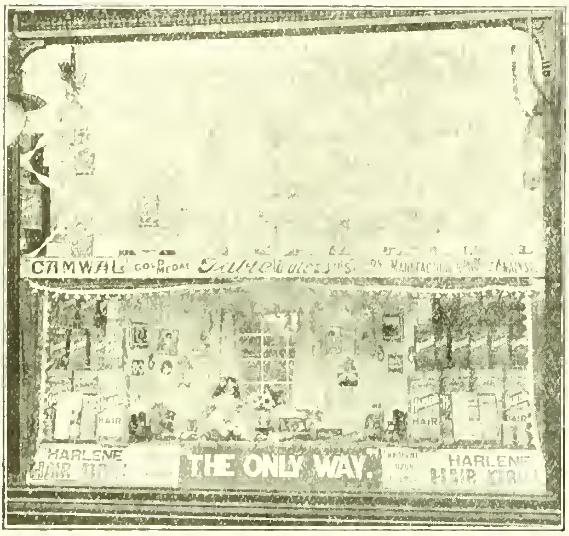


Fig. 3.

The lattice-work in the top portion was made from strips of white crêpe paper, twisted, and then pasted on to the window. The words, "The Only Way" (a topical title which playgoers appreciated), were cut out of white demy and pasted on a dark red crêpe paper. Flowered crêpe paper formed the carpet of the room. The window at the back was formed of a mirror with white tape ($\frac{1}{4}$ in. wide) tacked across. The curtains surrounding it were made of cheap muslin (1*d.* per yard), while yellow cheese-cloth formed the drapery at the top and sides. The room was papered with a little spare wall-paper, the pictures being postcards, etc. The whole cost of this window amounted to about 3*s.* 6*d.*, and the prize won was worth nearly twenty times that sum. The whole point of the display consists of the doll representing a little child who is rubbing the hair-restorer into the bald pate of her wooden dolly, saying "Never mind, dolly, it will soon grow."

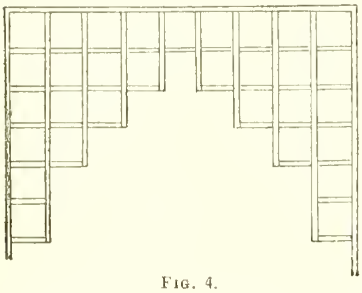


Fig. 4.

The doll's dresses can be made for a few coppers from a piece of flowered crêpe paper. Crêpe paper or ribbon makes splendid lattice-work, but don't fall into the draper's error of having the openings so small as to afford only a confused view of the display to the passer-by. A light wooden frame, as illustrated in fig. 4, made to fit the window, enamelled any colour, is always attractive, and has the advantage of permanency, as it can be used in subsequent displays.

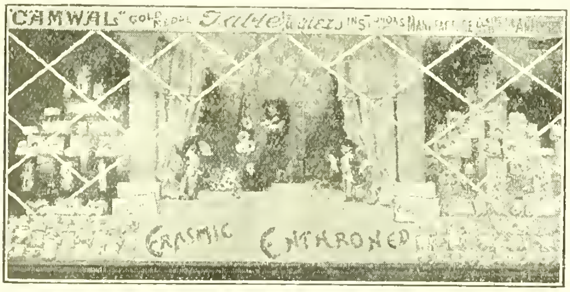


Fig. 5.

Another type of lattice-work, made of ribbon or tape (costing about 3*d.*), is shown in the Erasmic window (fig. 5).

The methods of using art muslins are well worth practising. Simple looping (see fig. 6) is often effective, and if the bows are made with a material of a different colour, the effect is further enhanced.

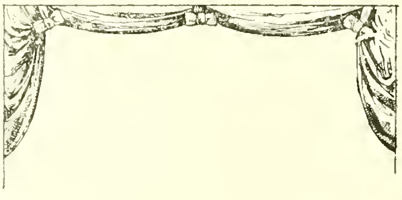


Fig. 6.

Neatly pleated curtains form exceedingly pretty backgrounds. Crêpe paper or plain stiff materials have enough "body" to remain in pleat, but the softer art muslins, etc., must be stretched tightly and tacked on a light wooden frame if they are to retain their pleated form. Simple pleating, illustrated, diagrammatically, can be practised with paper, but stuffs are more difficult to pleat than paper, requiring pressing under a damp cloth with a hot iron. Vertically pleated curtains, tied in the middle, form an effective background, space being left for showcards, as seen in the sketch below.

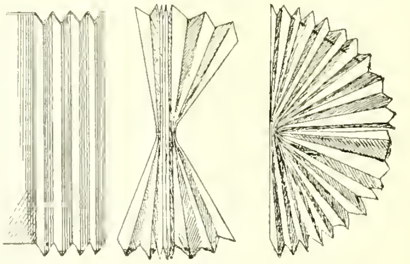


Fig. 7.

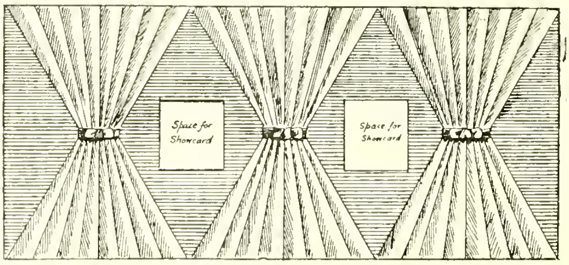


Fig. 8.

A fan-shaped background formed by tacking pleated muslin or bunting to a light wooden frame is very effective. If the material be tacked so that the front of the frame-work is exposed, the wood can be enamelled white or other suitable colour. Showcards can be placed at the centre, and also around the edge if desired, or empty cartons can be glued to the framework.

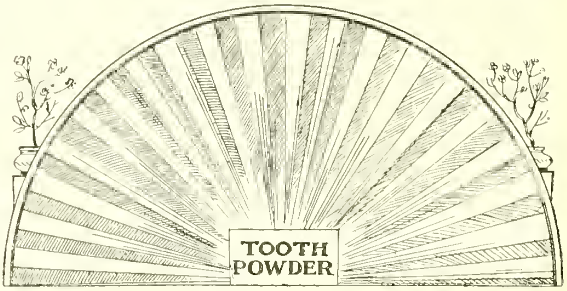


Fig. 9.

The variety of the uses of muslin are almost endless, and if no place can be found for tacks, there are always needle and thread to fall back upon.

Simple Window-dressing

can be made most effective, as seen in the appended photograph of a supposititious Chinese temple, which does duty

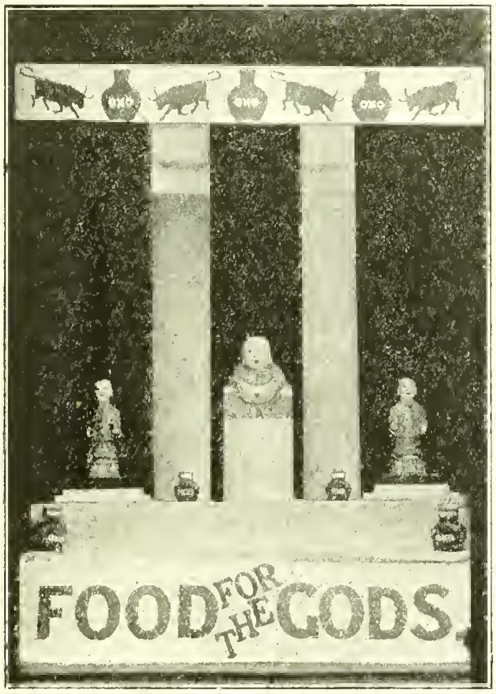


Fig. 10.

as an oxo display. The background consists of black plush, while the steps and pillars are formed of boxes and circular dummies covered with marbled wall-paper of different designs.

Boldness in a display always makes a direct appeal to the busy man, as no time is wasted in getting the main point of the display. The average pharmacist need not call in the professional window-dresser for advice as to the goods he ought to show nor for the manner of showing. As regards artistic effects, his wife's advice can usually be taken, as the gentler sex study colour-blending in their dress and house decoration, while woman's mind is essentially adapted to dealing with the small details that make all the difference between an artistic success or failure. The house will often lend many little decorative aids, as flower-vases, artificial flowers and plants, baby's dolls and toys. One of my most helpful Christmas displays was all due to a borrowed doll. It was dressed as Father Christmas in red sateen, with cottonwool trimmings and a cottonwool beard. The centre of the window was occupied by a cottage made of a box covered with brown paper, marks indicative of stones being made with white paint. Cottonwool dipped in alum solution made lovely icicles. The door was drawn in black with white panels, cottonwool snow stuck in the corner and on the steps (also painted on). A brass-headed tack did duty as door-knob. A homœopathic carton acted as chimney for the cottonwool smoke to emerge from. Some cottonwool snow tied on black thread was falling, and the electric light in the box (house) sent its warm rays through a sheet-gelatin window over the cottonwool covered lawn. It looked very Christmassy, and there were Christmas presents of the usual kind in Santa Claus' pack and on both sides and in front of the house (fig. 11). This display brought the children, the chemists' best friends, the children brought their parents, and the parents bought the goods. Total cost of display, excluding cotton-wool and the borrowed doll, was but 6½*d*. It is easy to make a fine show with expensive curtains and other aids, but with thought and the application of what knowledge and common sense the average pharmacist possesses, a most artistic display can be made for little cost.

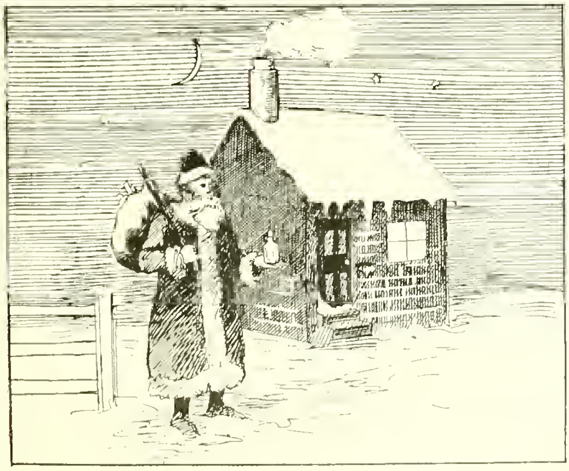


Fig. 11.

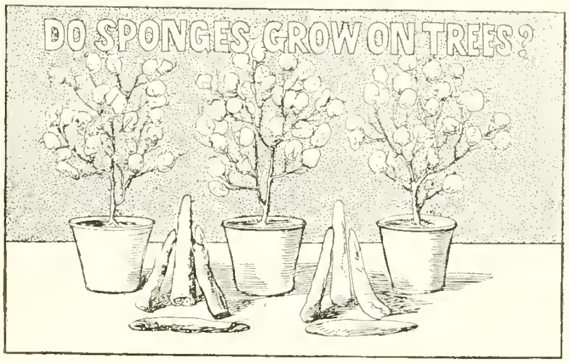

DO SPONGES GROW ON TREES?

Fig. 12.

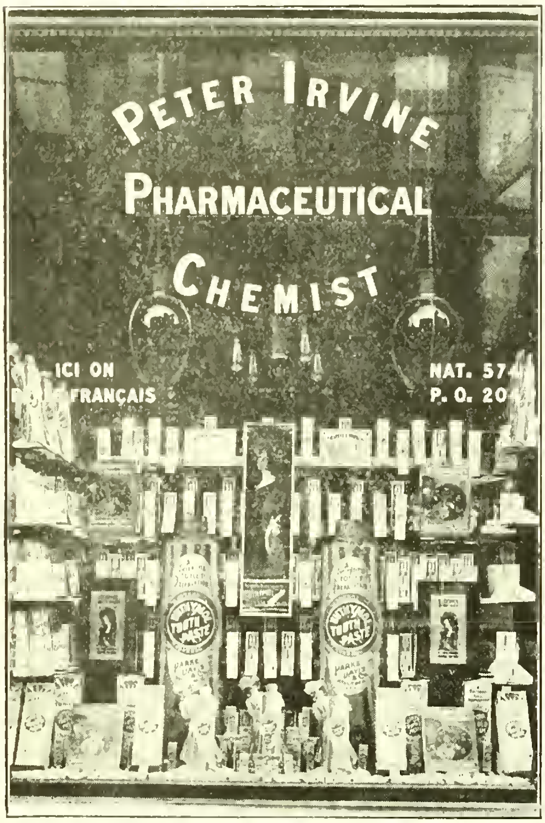
Another simple but attractive display was for showing sponges. A few tree branches, on lines originated by our American cousins, were procured, and the leaves stripped off and sponges tied on in their place. These fixed in plant pots, with a few loofahs, sponge-bags, and bath-gloves included in the window, made a pretty sight. The words "Do Sponges Grow on Trees?" cut out in block letters from white demy, pasted on the window about the level of the eye, completed the effect. Many of the sponges were priced, and one or two small-written cards were attached, such as "Why Not Choose Your Own Sponge?" "Sponges for Toilet and Bath," "From 3d. to 5s." (See fig. 12.)

Fig. 13.

Occasional window-displays not for direct sales are useful. Such occasions as the local hospital carnival, annual sports, gala procession, fancy-dress fair, etc., may be made much of. If you dress the window to keep up the spirit of the day, it will be good for your business. The last photograph is one of my Hospital Carnival windows, which secured first prize. The background was painted on cheap canvas, the colours being—whiting, lime blue, yellow ochre, rose pink, and emerald green. A prehistoric surgeon dressed in fur was sawing away on a prehistoric man's leg with a prehistoric cardboard saw. Other prehistoric cardboard instruments, such as knives, forks, choppers, etc., being on the tree, also a "Nite bell." The prehistoric nurse had some broken prehistoric people to minister to. The cost of the display was under 5s.

CHEMISTS' WINDOWS.

New ideas for dressing windows are invited. Photographs of windows sent to the Editor for reproduction should be accompanied by notes on how the displays were arranged.



A Euthymol Window.

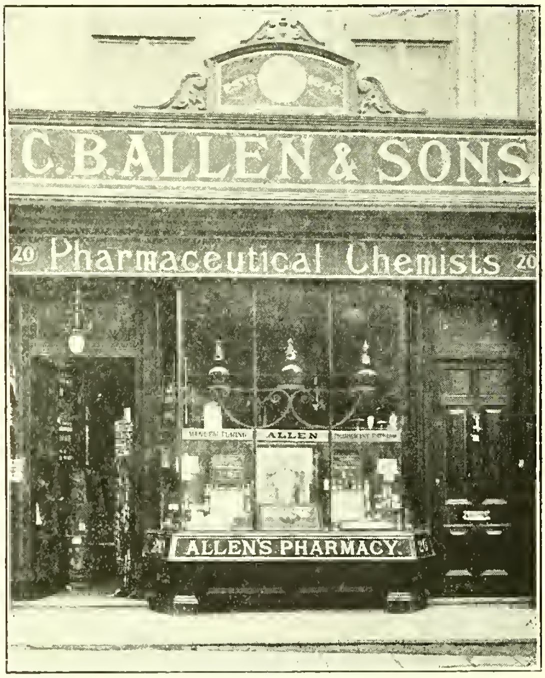
The high-class window-display of Euthymol tooth-paste is by Mr. Peter Irvine, Ph.C., 71 St. Vincent Street, Glasgow. The noticeable features of the attractive display are the effective use of the two huge dummy tubes, the well-balanced arrangement of the showcards, and the conspicuous vertical series of small dummies.

Revenue from Enamelled Letters.

Every chemist's shop, from the windows outside to the showcase doors and mirrors inside, affords excellent ground for the display of advertisements made up of enamelled letters, such as:

BLANK'S
Photographic Plates,
Best and Surest.

A member of the *C. & D.* staff had a chat recently with Mr. W. Martin, Ph.C., Southampton, whose shop-window, door-mirrors, and other glass surfaces are liberally used for this purpose. "All paid for," said Mr. Martin, and he began to "tot" up his revenue from this source. It was not far from three figures annually.

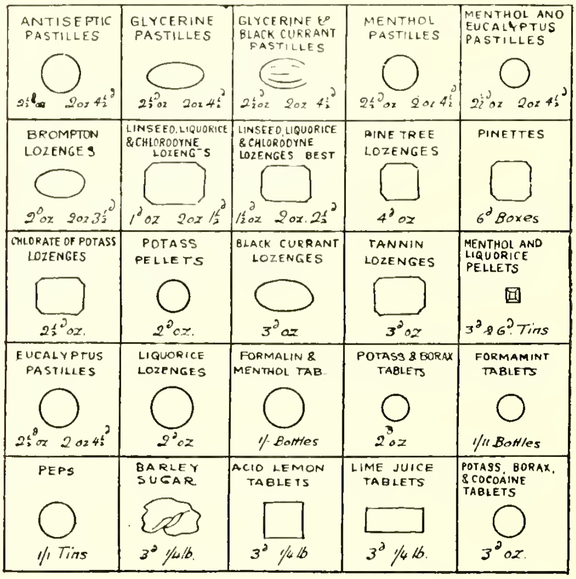


A President's Pharmacy.

The above represents the pharmacy of the President of the Pharmaceutical Society of Great Britain at 20 High Road, Kilburn. Space did not permit us giving it when we printed notes on the President, Mr. C. B. Allen, in our issue of June 10. Particulars of the pharmacy were given then.

A Lozenge Showcard.

The sketch here reproduced is one of a card which Mr. W. R. Watson, chemist and druggist, 1 Market Parade, Chadwell Heath, found to sell a large quantity of lozenges when shown in the window or on the counter. The drawing is self-explanatory. Mr. Watson used photo-mountant for attaching the lozenges, etc.



ANTISEPTIC PASTILLES 2½d oz 2 oz 4½d	GLYCERINE PASTILLES 2½d oz 2 oz 4½d	GLYCERINE & BLACK CURRANT PASTILLES 2½d oz 2 oz 4½d	MENTHOL PASTILLES 2½d oz 2 oz 4½d	MENTHOL AND EUCALYPTUS PASTILLES 2½d oz 2 oz 4½d
BROMPTON LOZENGES 2d oz 2 oz 3½d	LINSEED, LIQUORICE & CHLORODYNE LOZENGES 1d oz 2 oz 1½d	LINSEED, LIQUORICE & CHLORODYNE LOZENGES BEST 1½d oz 2 oz. 2½d	PINE TREE LOZENGES 4d oz	PINETTES 6d Boxes
CHLORATE OF POTASS LOZENGES 2½d oz.	POTASS PELLETS 2d oz.	BLACK CURRANT LOZENGES 3d oz	TANNIN LOZENGES 3d oz	MENTHOL AND LIQUORICE PELLETS 3d & 6d Tins
EUCALYPTUS PASTILLES 2½d oz 2 oz 4½d	LIQUORICE LOZENGES 2d oz	FORMALIN & MENTHOL TAB 1/- Bottles	POTASS & BORAX TABLETS 2d oz	FORMAMINT TABLETS 1/11 Bottles
PEPS 1/1 Tins	BARLEY SUGAR 3d ¼ lb.	ACID LEMON TABLETS 3d ¼ lb	LIME JUICE TABLETS 3d ¼ lb.	POTASS, BORAX, & COCOAINE TABLETS 3d oz.

Smuggled Opium valued at $25,000 was recently put down the San Francisco sewers by the Customs officials. The price of opium in the Chinese quarter in San Francisco is $70 for a five-tael tin, the highest price ever known.

SNOW HILL BUILDINGS.

The Administrative Headquarters of Messrs. Burroughs Wellcome & Co., London, New York, Montreal, Sydney, Cape Town, Milan, Shanghai, and Buenos Aires.

Less than thirty years ago Messrs. Burroughs Wellcome & Co. took premises in Snow Hill Buildings, London, the prominent corner of Holborn Viaduct, as offices and warehouses, and to most people the place is now as it was then, few having the slightest idea of the changes and developments which have been going on internally year by year. If a contrast were needed, it is afforded by the following extract from an article published in The Chemist and Druggist of January 28, 1888 :

> "The premises are in the form of a half-circle, but the commonplaceness of this arrangement is counteracted by a screen of half-moon galleries which divides them into two parts, the greater being occupied as a general office accommodating a dozen clerks (half of whom are ladies). Below the office are two basement floors. The lower one is used partly as an engine-room, the engine providing power for the lifts and the machinery of the printing department, and partly as a carpenters' and mechanics' shop. The floor over this is kept as a packing-room for the home trade and affords space for a dozen packers to work in. Ascending the staircase, we first reach the half-moon gallery, which we find utilised as a room for lady clerks who read and write stenography and work typewriters with singular rapidity. . . . The first floor is divided into three departments, which are used by the Principals and their amanuenses. The second floor is occupied as a stock-room, as is also the floor above it. The top floor is occupied by a staff of seven printers and compositors. The work in the City premises consists chiefly of filling City and Home orders—export orders being executed at the factory."

Messrs. Burroughs Wellcome & Co.'s Headquarters.

To tell, even in unemotional language, the development of the business since then would almost read like a fairy tale. The works of the company were at Wandsworth in 1888, but were removed to Dartford in 1889, and have multiplied many times since—even at this moment they are being extended. Thither have been taken every bit of manufacturing and the execution of all orders, export and country, so that only orders for postal despatch and town orders are executed at Snow Hill Buildings, which have thus been relieved of everything of a business nature except administrative, clerical, designing, and literary work, and attention to what we may call urgent business. Some of the departments did not exist in 1888, and those that did have grown enormously, so that as the opportunity arose of acquiring adjoining premises they have been purchased by the firm, who now own the whole block down to the railway station on Snow Hill (Nos. 37 to 44) and on the Holborn Viaduct side (Nos. 64 to 67), including a brewery which stands at the base end in the centre of the triangle, of which the apex is the original office, now used solely as a reception-room for callers. A floor, or part of a floor, here and there in premises recently acquired is still let, but the tenants leave as Messrs. Burroughs Wellcome & Co. require the room, and it is expected that in a few years the whole of the buildings will be devoted to the direction of the B. W. & Co. business. The sketch in the centre of this page is a correct representation in perspective of the block : the line onthe Snow Hill side is, however, convex. There is no detail in the drawing which does not exist in actuality.

On entering the old office we find the same old half-moon galleries, and under the guidance of the General Manager (Mr. George E. Pearson, F.C.S.) we began a tour which quickly dissipated any idea of comparing details with those from which we have quoted above. The half-moon galleries we found to be the Ledger Department, and the rooms have invaded a hinterland that knew not Messrs. Burroughs Wellcome & Co. in 1888. The heavy ledger tomes of that day have given place to card ledgers, and brains are supplemented by calculating-machines, while the whole department is under the control of a chartered accountant, who has a staff spread through several rooms besides the Ledger Department proper. One is struck, in watching the work in this department alone, by the stupendous changes which have occurred in two decades; the difference between Then and Now is as the difference between Parochial and Imperial. Next we come to the Estates Department, which looks after all the property of the firm at home and abroad—ground, bricks and mortar, insurance, trade-marks, and everything else to which the sacred word Property is attached. The importance of the department may be judged by the fact that the staff includes an architect, a solicitor, a trade-marks expert, insurance and other experts, skilled assistants and clerks. A Costs Department was next visited : this again exemplifying the advantages of devolution, for it has to do with the work going on at the factories in another county, experience having proved the value of relieving Dartford of the calculations and records requisite in arriving at the cost of production. The factories supply the data, and Snow Hill does the rest. The chartered accountant's room is contiguous to the department for the general work of accountancy, and it was curious to see here a calculating-machine such as we last saw in use by an eminent statistician, who revelled in hundreds of thousands in the determination of scientific generalisations. That such an instrument should also be required in "costing" pharmaceutical products is an index to the size of Messrs. Burroughs Wellcome & Co.'s business. So far as its extent on the face of the earth is concerned, we had proof of that in the Foreign Department (a floor facing Holborn Viaduct), where we observed a pedestal desk with a multitude of shallow drawers, the handles of which were embossed with such words as "Canada," "South Africa," "Persia," and so on.

"Maps," said Mr. Pearson, "to show where our travellers are."

"What has become of the gentleman who was attacked on the way to Ispahan?" we asked. The drawer was pulled out, and we found a green-silk cord attached to little green-headed pins stuck in Teheran, Ispahan, and half-a-dozen other Oriental cities.

"That is where he was attacked," Mr. Pearson said, pointing to a smaller pin half-way between Teheran and Ispahan. "With these maps we can see where our travellers are at any time, and you'll see from the names and numbers that there's a B. W. man everywhere."

The Foreign Order Department is in an office annexed. Going to the Records Rooms, we passed an isolated Rest Room for the women of the staff, where any of them who become indisposed during work are taken and attended to by the doctor attached to the staff. The Records Rooms are the apotheosis of the card system: thousands of cards being stored here giving the names and addresses of the firm's clients at home and abroad, with sufficient spaces upon them to record the nature of the communications to them for a dozen years or more. More than a score of clerks are daily engaged here, and they have several rooms to work in, besides others under the roof for storage of books and cards. We had now reached the top floor (seventh), which at one time was the printing room, and to get at another section of the buildings had to descend to the first floor, where the General Manager's room is, also one for Mr. Clay Sudlow, now Treasurer of the business, who drops in occasionally to give his old colleagues the benefit of his experience. On this floor is the letter-opening room: the letters are opened every morning by machinery—which remark must suffice for reflection on the volume of work done. The Buying Department, with over thirty clerks, occupies two large offices on the ground floor.

We now entered the Snow Hill region, two long floors of which are devoted to the Advertising and Literary Department. In 1895 the present manager of this department had one typist to assist him; now the staff in the department numbers over a hundred. One floor is entirely devoted to advertisement business, and another to literary work: this is where all the writing is done. It is of a varied character. The latest achievement is a souvenir volume of the Coronation, extending to about five hundred octavo pages, beautifully illustrated, and exquisitely bound at the Dartford works. Copies of this were presented to the Royal, diplomatic, and other visitors who participated in the Coronation festivities. Attached to the literary department is an Arts section, where we found seven artists. They design the firm's illustrated advertisements, show-cards, in fact everything new which can be pictured by an artist is so treated before it evolves into the concrete. As an example, we were shown a new style of bottle and packing for one of the firm's specialities, executed in colours; and the drawing of the buildings reproduced here in much reduced facsimile is another example of the work done. The Photographic Department is situated close by. Attached to this department is a well-equipped dark-room and photographic laboratory, where the work done is largely of a control and testing nature, all "tabloid" photographic materials being authenticated as to properties and utility before reference is made to them in the firm's publications. Two offices on the ground floor of this section are devoted to the Shipping and Transport Department.

In the inspection so far little evidence of goods had been struck, but now we came to a series of apartments in which are kept the stocks of all kinds of the firm's manufactures sufficient to meet urgent and town orders, all others being executed from Dartford. The offices are connected by private telephone wire with the Dartford works. There are eight telephone wires on the public system and eighty internal telephones, all being connected with an exchange on the premises. The town orders are received in an office on the ground-floor at Snow Hill, which is connected with the stockroom above by a series of lifts and shoots, the latter of an exceedingly ingenious nature, resembling ladders placed at an angle and going from floor to floor. Strong boxes for the goods are placed on these and slide down, as the rungs are rollers. A continuous lift is also constantly at work: this has a floor about every 2 yards, and the packers put on goods as it reaches their level. Of course it carries goods up and down simultaneously. For the smallest packages there is a tiny bucket, 6 in. in diameter, attached to a rope which slides through tubes in the floors from the ground-floor to stockrooms at the top taking the order, and back again with the goods. We found isolated rooms devoted to "specials," poison-rooms in charge of registered chemists. A most interesting section is devoted to fitting up medicine cases and chests to special orders, including Government orders, this being quite distinct from the stock patterns mostly in demand, which are fitted up at Dartford. A room for hypodermic syringes was another scene of activity, and close to it are kept stocks of serums for emergency orders.

This is the barest possible outline of the premises and the work done in them day by day. Returning to the General Manager's room, on the table of which stood a fine model in silvered bronze of the firm's conspicuous general trade-mark—a unicorn—we had a glance into some records which not only exemplified the carefully thought-out system that prevails throughout all departments of the business, but the great strides which have been taken in it during two decades. And Mr. Pearson gave us the assurance that no matter where the interests of the firm may be, in Shanghai or Schenectady or on the seventh floor of the building, the organisation is such that all are attended to with equal care and equal knowledge of requirements.

Practical Notes and Formulae.

Poultry Parasites.

The following powder is used for dusting on poultry to kill lice and other parasites which infest the feathers:

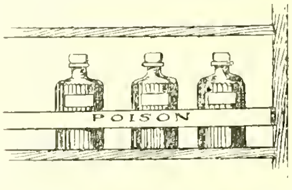
Naphthalene	32 oz.
Snuff	8 oz.
Sulphur	8 oz.
Insect-powder	6 oz.
Borax	4 oz.
Oil of cedar	2 oz.
Sifted bran	2 lb.

Mix the oil with the bran, add the other ingredients, and finally sift.

The bran is used as a filler and may be replaced by other substances, such as chalk, fine sawdust, talcum, or starch powder. The powder is put up in tins with sprinkler tops.—*Pharmacal Notes.*

Safeguarding Poisons.

Mr. G. W. Gibson, pharmacist, of St. Pancras Union Dispensary, finds the arrangement sketched below useful for keeping poisonous galenicals at the dispensary counter with safety.



A board labelled "poison" is hinged at one end to the upright of the shelf about an inch from the bottom, thus allowing the labels of the bottles to be visible. In the case of long shelves the board may be fixed at both ends, the bottles being readily lifted over it.

Protection from Mosquito Bites.

The following have been recommended for keeping away mosquitoes, a few drops being placed on the person or sprinkled on the pillow:

1.

Citronella oil ...	1 oz.
Spirit of camphor ...	1 oz.
Cedar oil	½ oz.

2.

Castor oil,
Alcohol,
Lavender oil ... equal parts

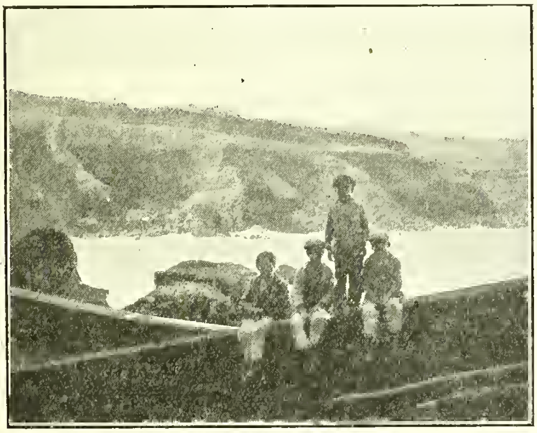
3.

Citronella oil ...	1 oz.
Vaseline oil ...	4 oz.

Other substances that have been recommended are pennyroyal oil, peppermint oil (mixed with lemon-juice), cassia oil, and paraffin oil. As fumigants pyrethrum powder is most used, and there are also employed powdered stramonium, dried orange-peel, Mimm's culicide (equal parts of phenol and camphor), and sulphur.

A Pharmacist's Holiday.

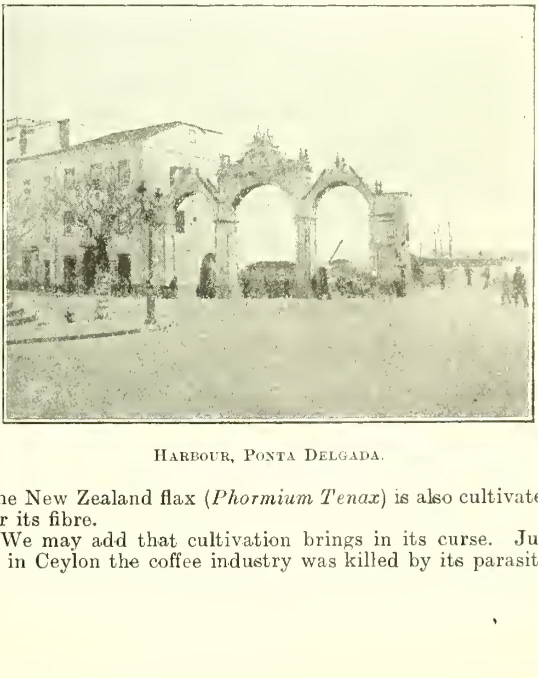
Mr. G. Claridge Druce, M.A., Ph.C., F.L.S., continues his account of a trip abroad, dealing with Azores and its flora.



Capellas, San Miguel.

We took advantage of our stay in Madeira to visit the Azores, which are situated in mid-Atlantic, almost equidistant from Newfoundland (1,700 miles) and the Lizard (1,147 miles), New York being 2,228 miles and Portugal 700 miles distant. They are surrounded by a storm-tossed sea, but in calm weather and a rash mood we took our tickets for a journey round those islands in a mail-boat which leaves Funchal monthly. However, the Fates followed us, for a storm got up as soon as we left the anchorage—it is no harbour at Funchal—and although the dining-saloon of our boat was very clean and richly ornamented, being I need scarcely say built in Britain, the motion was too lively for land-lubbers, and even in one's berth the pitch and toss of the vessel (she was a dreadful gamester) and the whirr of the screw, which seemed to be as often out of the water as in it, acted like the inquisitor's rack, and aching in body, with a deadly void inside, we counted the dragging seconds on that dreadful journey. After a century or two of anguish (the journey takes from Tuesday to Thursday morning) we somehow got into the tiny harbour of Ponta Delgada, in San Miguel, the largest island of the Azores, and leaving those who liked to proceed to distant Fayal, we got a boat and landed, soon finding ourselves in a nice little hotel kept by a Mr. and Miss Brown, children of an Englishman who had years ago come out to the islands to lay out the ornamental grounds of the neighbouring Quinta. It was an old mansion turned into a hotel, with a very dark but scrupulously clean kitchen, brightened with great bunches of white arum lilies. At first the place seemed cold after Madeira, and we were glad to warm ourselves at the charcoal-stove, but a sadly needed meal and quiet soon refreshed us, and we watched with truly philosophic charm, like spectators seeing other people fight, the antics of our unstable craft as she rolled and pitched in the harbour as the fierce gusts swept by, her red funnel swaying to and fro in weird gyrations. And I may say that there she moved (lay is not the word) for three days, being unable to get out of harbour in the teeth of the gale, and having to keep her screw going to avoid being swept upon the coast. The Azores consist of nine islands, entirely of volcanic origin; hence limestone or fossils are unknown or practically unknown. They rise abruptly from the sea, and in San Miguel occasionally have coast cliffs 1,400 ft. high, and in some cases—as on the southern side—show a chronological map of the islands' history, for layer upon layer of different thickness, sometimes of light-coloured sand, and at others of black ashes, then of pumice fragments or of a bluish clay, and then again of scoria, show unmistakably how they have been built up by volcanic action and in such a place by the ejected material of gigantic volcanoes. In the eruption, for instance, of 1630, the whole island was covered with volcanic dust from 5 to 17 ft. thick. Hence it is not surprising to find that the entrance gateway, the public buildings, churches, etc., are built of lava, a hard and durable building material which, despite the force of the winds, scarcely weathers in the course of centuries, so that the oldest buildings look more modern than the early nineteenth-century buildings at Oxford. The name "Azores" is derived from the hawks or buzzards which once were abundant here, but with the destruction of the forests are now less frequently met with. San Miguel, or, as its name has become popularised in England by its oranges, St. Michael, is the largest island of the group, having a population of above 130,000 people, and stretching nearly east and west forty-one miles long by nine and a quarter broad. Ponta Delgada is the capital and one of the chief Portuguese towns. It is clean and prosperous, albeit the exportation of St. Michael oranges has been to a great extent superseded by that of pineapples, which are now very largely cultivated for the English market, over a million being annually produced. They are grown under glass without artificial heat except such as that generated by the decay of vegetable matter, this vegetable matter being the cut-up leaves and young branches of the mature *Erica* and other semi-woody plants, thus leading to the destruction of the charming half-heathy, half-woodland growth which once abounded on the higher hills.

It was a real enjoyment in the Azores to tread upon firm ground and to be able to walk along an ordinary road; but here, as in Madeira, a view was out of the question, since each garden was surrounded by a lava-wall of 12 to 18 ft., built in order to give shelter from the winds, and they were too well built to climb; still in the crevices a few mosses and ferns were found. In the town were magnificent trees of *Araucaria excelsa* nearly a hundred feet high. The climate, although somewhat colder than Madeira, is very equable, having neither winter's cold nor summer's heat, the islands being in the Gulf Stream, so that frosts are unknown at the sea-level. There are extensive pasturages on which numerous cattle are bred, and milk and butter of good quality are therefore easily obtainable. The chief cereal is maize, and very quaint are the tall drying-frames for the corn. No bit of ground that can be cultivated is wasted. Many grapes are grown, and the vintages are passable, but, as I have said, the orange exports have decreased from 261,700 boxes in 1859 to 40,000 yearly at the present time. Tea is grown in small quantities, and to encourage this industry a duty of 6*s.* a lb. is imposed on foreign tea. Beetroot is also grown, and employs a few people, but to help this a duty of 1*s.* is imposed on British sugar, so that the natives have to pay nearly 1*s.* a lb. for the very impure and unsatisfactory home product. Alcohol is made, curiously enough, not from maize, but from the sweet-potato, and tobacco is also grown in small quantities. The New Zealand flax (*Phormium Tenax*) is also cultivated for its fibre.



Harbour, Ponta Delgada.

We may add that cultivation brings in its curse. Just as in Ceylon the coffee industry was killed by its parasite, so here the orange and the vine have in turn suffered, as the larch is doing in Britain.

One other industry must be mentioned, that of whale-fishing, which employs a considerable part of the population on the north side of the island at Capellas, and a visit to this resulted in one of my best botanical discoveries in the island.

Mr. Druce and his Companion in the Azores.

As the import duty on machinery is very heavy, the agricultural implements, etc., are of a very modest description. the village carts often having solid wheels turning on wooden axles, as do some of the windmills. Mules, donkeys, a few horses, and occasionally sheep are used for draught purposes. A sheep-cart to which a regular Jupiter Ammon sort of animal is harnessed comes like a bolt from the blue when seen for the first time.

There is electric light in the streets, and we arrived just as the engineers were installing a Marconi system, which has already shown its value. I have by me a little bit of blue-paper tape with a message in dots and dashes sent to me by Marconi across the Clifton Grammar School when his invention was in its infancy. But even then one was convinced of its practicability when one saw the ghost-like influence of transmitter and receiver across the space of that scholastic institution.

The Azoreans are a delightful people, honest, obliging, kindly, and industrious; the imposing-looking prison is one only in name, as no prisoners are there. The district, too, is healthy, and enteric fever is said to be unknown. I may say that had we gone on the round with the vessel we could not have landed at Terceira, as plague, introduced by rats, was ravaging there.

English money was at a good premium, but, of course, varies from time to time. As in Portugal, a newspaper may be sent by post in the island for one-tenth of a penny, and there is a separate set of stamps not only for the chief islands, but for their capitals, thus elucidating for my philatelic knowledge the mystery which hung about the position on the world's map of Angra and Horta.

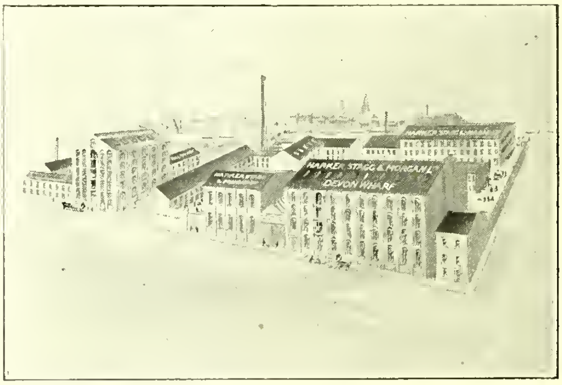
Our first expedition was to go to the beautiful gardens of Dom José do Canto, where about 3,000 species from almost all zones are cultivated, and never have I seen such a variety of trees. Hedges 12 ft. high of camellias were in fine blossom of all tints, from snowy white and blush pink to deep crimson. There were fine tree-ferns, bamboos and majestic palms. On the extensive rockeries grew a rich variety of ferns, and on the gravel paths I detected a plant not recently seen in the Azores, our tiny *Tillæa muscosa*, and as an introduced plant the American *Veronica peregrina*. In front of the Marquis Jacome Correa's garden are two splendid palms, the Chilian *Jubæa spectabilis*, with their trunks like Tuscan columns, so symmetrical are they.

Another botanising expedition was in a westward direction, and on this we found the South American *Bidens pilosa*, with *Erigeron linifolius* from India, and *E. canadensis* from North America, the Chilian *Fuchsia Riccartoni*, the African *Senecio mikanioides* and *Richardia* (our white arum lily), the latter following the course of the hill streams and making a snow-white streak as seen from the distance, also the showy American *Tecoma radicans*. On the lava walls I gathered *Festuca Myurus* and *Trifolium angustifolium* (neither recorded in Trelease's "Azorean Flora" for San Miguel), and by the wayside *Urospermum picroides* and the British *Ballota nigra*, which had not been noticed for many years. *Fumaria muralis* was common, and here and there the fragrant incense tree, *Pittosporum*, showed itself. Our common wild strawberry was in the hedgerows and also the Italian arum, while *Euphorbia azorica* also occurred and *Alternanthera Achyrantha* was frequent, the common thistle being *Galactites tomentosa.*

A Bird's-eye View.

Messrs. C. R. Harker, Stagg & Morgan, Ltd., still further extend their premises in Mile End, London, E.

It is just six years since we described (*C. & D.*, 1905, I., 757) the premises at Devon Wharf, Mile End, to which Messrs. C. R. Harker, Stagg & Morgan had removed their drug warehouses and laboratories from Laurence Pountney Lane. Now they have secured for extension the adjoining premises on Bell Wharf, which are the buildings on the left of the bird's-eye view below. Bridge Street is between Bell Wharf and Devon Wharf, and the company have constructed a subway there for carriage as well as for conveyance by steam. The large building on the right with the name of the company on the roof (the chief building) has been used until now as offices and warehouses; the two top floors being for the storage of drugs in original packages. The smaller building of two storeys to the left of this has been used for the packing of specialities. The company have now made the Bell Wharf building into the drug-warehouse, and have cleared the second, third, and fourth floors of the chief building, and to the top floor they have transferred the printing department, while the speciality packing is removed from the two-storey building to the third and second floors.



The change is significant of the times, since it shows how manufacturing houses are compelled to meet the demand for pharmaceutical goods ready packed for sale. Moreover, another significant fact is here exemplified—namely, that manufacturers must specialise in the manner that they do the packing. Messrs. Harker, Stagg & Morgan's printing department is not one simply to print the names of customers on stock labels; they are actually designing labels, cartons, boxes and showcards, and printing these on the premises in colours. Block processes alone are employed, but the results rival lithography. We have inspected some beautiful specimens, gold being used in some of them, and all are of original design, beautifully executed and not one of them in questionable taste. We understand also that the company compose advertising matters (such as folders) for their customers, designing covers, and arranging type to secure originality in get-up and effectiveness in selling power. The transfer of the department to the chief building is evidence of how this work has been appreciated, and of endeavour to go on from good to better in artistic execution.

PHARMACY IN UTRECHT.

By W. Maskew, Pharmaceutical Chemist.

THE little kingdom of the Netherlands is attractive and unique as a holiday resort. Each succeeding visit I have made has afforded me new and more agreeable impressions of the country as well as of its people. "It's only a span," runs the announcement on a railway poster, for the Harwich route enables anyone living in London or East Anglia to sup at home and breakfast in one of the several Dutch cities. November, however, is not an ideal month for a visit to the Low Countries if on pleasure bent alone; but circumstances arise which prevent most pharmacists, especially those living at health-resorts, taking the necessary relaxation just when weather and other conditions are most favourable. Being occupied in other pursuits on this occasion, my enthusiasm for photography had not much outlet, as, although I had a camera in my pocket, it was not until I arrived at Utrecht that I made any exposures. This town was the last of my itinerary, and had its pharmacies been less attractive and conspicuous I might have returned without even this scanty and imperfect record, collected, as it was, within a few hours of taking the Hook of Holland express on my return journey.

The Pharmacy of Messrs B.A. Verheul & Co.

De Liefde's Central Pharmacy

Mr C. Sleeswijk's Pharmacy 99 Cathar Singel

The Pharmacy of Miss Olivier in the Biltstraat

The Pharmacy of Mr A. G. H. V. Spanje

Utrecht is not as busy as Amsterdam or the Hague, but it possesses a quaintness which recalls those ancient days when it played so important a part in the history of the world. It was in the Chapter Hall of its cathedral that, in 1579, the Act of Confederation was signed, and later, in 1713, the famous Treaty which ended the War of the Spanish Succession, and materially affected the future of England, France, Prussia, Savoy, and other European countries. The important museums also help to keep up the historical associations, while in none of the Dutch cities do we find so characteristic a canal as the Oude Gracht, lined on each side with chestnut and lime trees. The tower of the cathedral is a noted landmark, and very remarkable from an architectural standpoint. It dates from 1267, and all varieties of Gothic architecture are united in it. Another feature is that the tower stands apart from the cathedral—the nave, or connecting portion, having been blown down three centuries ago. Utrecht is the seat of a University, though that of Leyden is the older of the two. As regards chemical and pharmaceutical education, Utrecht possesses more students than any of the four Universities, including Amsterdam and Groningen. It is therefore not to be wondered at that the pharmacies of Utrecht are of a high class, and the few I illustrate may be taken as typical of the rest.

Near the entrance to the hotel where I spent the night I noticed a prescription-reception box, belonging to a particular pharmacy, very like an ordinary letter-box in character. These are very familiar objects in the outskirts of the city, and prove a great convenience to the public and doctors. Cycle messengers collect the prescriptions and orders three times a day, and these are promptly attended to at the various pharmacies. Perhaps the one noticeable feature in Holland is the number of lady assistants who are employed in dispensing, and who appear to outnumber the sterner sex. A great many of these take an assistant certificate, but there are about forty in the country who have graduated and become fully qualified.

The Van Spanje Pharmacy.

In the city of Utrecht there are twenty-seven pharmacies and thirty-nine druggists for a population of about 118,000. I was fortunate in having a short chat with

Mr. A. G. H. v. Spanje, whose pharmacy is widely known and important in every respect. This business was established in 1702, and has been in the hands of the Spanje family for three generations. The present owner's grandfather and father have both helped to create a connection which is much to be envied. The last-named owner retired some two years ago in order to devote more time to public work as a member of the City Council. The premises were rebuilt in 1870.

The Van Spanje Pharmacy is situated in the Steenweg, an old and busy street near the cathedral. The building is double-fronted, and there are two entrances, the doors of which have tastefully embossed glass panels emblematical of the Rod and Serpent of Æsculapius and the Caduceus of Hermes. The apotheek proper, or dispensing department, is screened from the drougerie by ornamental glasswork; the fine intercepting doorway is embellished with a design of the goddess Hygeia. The wall-space is covered with a substantial fixture of light carved oak, the shop-rounds on which have vitrified white and gold labels. Sick-room requisites, sundries, chemicals, and various other articles which constitute the bulk of the turnover in an English pharmacy, are supplied in the druggist's department. After an observance of the methods and neatness prevailing, I formed the opinion that not only was there a capable pharmacist at the helm, but that he was also an efficient business man. This was confirmed when I had made the acquaintance of the proprietor. He speaks English perfectly, and I soon discovered that not only does he take the *C. & D.*, but reads and digests its contents, and is also well versed in international pharmacy. In the management he is assisted by a younger brother and four assistants, while three additional assistants are employed in the drug department, where the more commercial business is carried on. There are no lady assistants at Spanje's. Special pains are taken in supplying equipment for doctors, hospitals, police, ambulance, and other societies. Many expensive appliances may be had on hire. For instance, the cylinders and necessary apparatus for the administration of mixed gases for anæsthesia are available on a portable stand. Also a "Pulmotor" (manufactured by an oxygen company at Schiedam), by means of which artificial respiration is promoted in cases of drowning and suffocation. The firm have a district depôt for B. W. & Co.'s preparations, and hold a larger stock of English proprietaries than is usually seen in Holland. My visit coincided with an hour when prescription-work was brisk, and I noticed that only round dispensing-bottles are used. The labels also are of rather uncommon design—those for internal use being printed in red and gold on white, and those for external preparations in black and gold on a blue ground.

Pharmaceutical Education.

The ethical standard is well maintained throughout the country, and the relations between doctor and pharmacist are closely interwoven. This desirable system has curtailed the exploiting and multiplication of specialities, which is a marked advantage to professional pharmacists. I broached the subject of pharmaceutical education, and find a system similar to the German one adopted. On leaving the State lower school at about the age of twelve a youth enters either a State high school for a period of about five years or a "gymnasium" for a period of about six years. There theoretical science is taught, after which there is five years at a University. Examinations are held in various subjects each year. The practical knowledge is usually wedged in with the University course, or a year in a pharmacy follows prior to the Final examination. There is also an assistants' qualification, but the subjects for this in no way count, should the holder of the assistant's certificate desire to obtain the diploma of an apotheker. There is no examination for druggists. The degree of doctor of pharmacy is obtainable, but one essential is that the early training must have been gained at a gymnasium—the period spent at the Burgers' school does not count. The pharmacy laws differ somewhat from those in other Continental countries, inasmuch as an apotheker may possess more than one pharmacy. It is also possible for a capitalist to own a pharmacy, provided he engages a responsible and diplomaed manager. There is no tariff as in Austria and Germany, consequently, although chemists have a monopoly of dispensing, there is throughout the country an undue amount of cutting, and co-operative pharmacies are not unknown. A Government inspection of pharmacies is carried out about once in six years. For this purpose the country is divided into four districts, each with a permanent Government inspector. A local Pharmaceutical Society exists for the Department of Utrecht, of which Mr. J. Koert is secretary.

One of my illustrations is that of the popular

De Liefde's Central Apotheek,

which occupies a conspicuous position in the Voorstraat, near a busy tram terminus. The premises, it will be noticed, are strikingly attractive and English in character. A considerable amount of dispensing is done, and the delivery taxes the energies of three or four cycle messengers. The pharmacy is under qualified management, and is a pioneer of reformed prices. This appeals to a large section of the public, although not entirely approved of by the majority of orthodox pharmacists.

De Liefde's establishment is spacious and lofty, and is fitted up in pitch pine. A long counter, screened from the public by glass partitions with numerous "guichets," runs the entire length of the interior; the dispensing is therefore done in full view of the public. The routine work is almost entirely accomplished by assistants of the gentler sex. The second storey is occupied by the analytical laboratory, office, and store.

Miss Olivier's Pharmacy.

Mounting an electric tramcar, I alighted in the Biltstraat, near the pharmacy of Miss Th. C. E. Olivier, who is a Graduate in Pharmacy of the Gröningen University. It was an interesting experience to meet this smart little lady whose success in the pharmaceutical world has been so marked. So well has she wielded the business *bâton* that in addition to the pharmacy which I illustrate, Miss Olivier is the proprietress of the Wilhelmina Pharmacy at 47 Baaustraat. This success has been brought about by enthusiasm for her calling, and an effort to render the best possible service to her *clientèle* and the public generally. The Biltstraat pharmacy is fitted entirely in white, and relieved with gold mouldings and ornamentation. A few of Parke, Davis & Co.'s goods and B. & W.'s tabloids were noticed, but the bulk of the proprietaries that I saw had a Continental origin. A feature is made of the radium treatment for internal and external use. The apparatus known as the Radium Emanator was described in the last Summer Number of the *C. & D.*

Other Well-known Pharmacies.

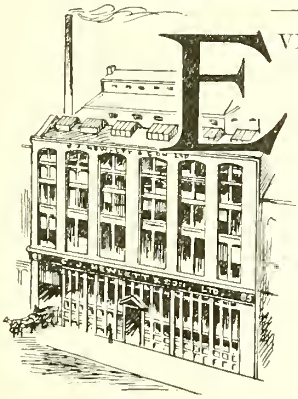
It would be invidious to single out from such a number a list of Utrecht pharmacies which merit more than passing notice in this article. Those I illustrate are from photographs which I took as a stranger to the city and as more convenient. Had time and circumstances permitted, I should have obtained further particulars concerning the following pharmacies, which I know to be of high repute :

Viel & v. Dijk, Jansstraat 15
H. A. de Weerd, Twijnstraat 28
J. Ruijs, Oudegracht 115
Wzn. Slis, Nachtegaalstraat 67
H. B. Fracher, Vredenburg 19
J. Koert, Goedsstraat 108
J. A. M. Hegland, Nieuwegracht 18
J. Denijs, Oudegracht
J. Heringa, Biltstraat 152
W. Boorgaerdt, Biltstraat
H. Brom, Hamburgerstraat

As a nation of shopkeepers the Dutch are methodical, courteous, industrious, and cleanly, with special emphasis on this last virtue. In Rotterdam, the Hague, and Amsterdam the business establishments are attractive and well organised, and to the casual observer there seems to be little difference in the habits, costumes, and general appearance from those of the English. Certainly quaint costumes are to be found in some remote and less populous districts; but if you visit the important towns these characters will be seen on picture postcards rather than in real life. There are no Bank-holidays nor early-closing days. Amusements are not indulged in to the same extent as in England, and in many large towns there is not a proper theatre. To those who intend visiting the Netherlands, I may add that Utrecht is a city where the character and customs of the Dutch can best be studied.

" HEWLETT'S."

Another addition to the premises of Messrs. C. J. Hewlett & Son, Ltd., is made by the erection of a house in Curtain Road, London, E.C., which is described herein.



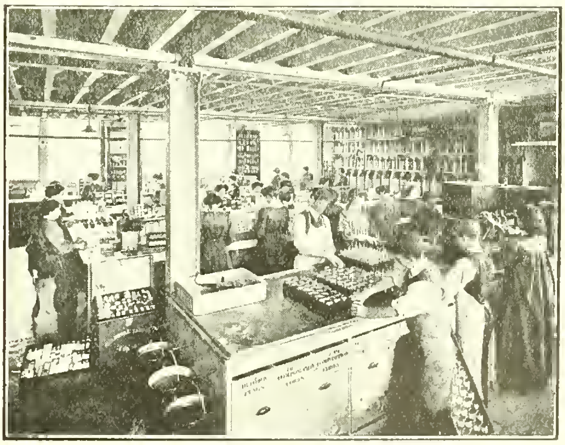
EVERY chemist in the British Colonies knows " Hewlett's." One who was visiting London not long ago stepped into a taxi with the curt instruction, "Drive me to Hewlett's." It needed but a little more prompting for the chauffeur to take his fare to the offices of Messrs. C. J. Hewlett & Son, Ltd., Charlotte Street, London, E.C. Now the business has added another street to the address—Nos. 83 and 85 Curtain Road, which is just behind Nos. 35 to 42 Charlotte Street. The freehold of these sites belongs to Mr. John C. Hewlett, F.C.S., chairman of the company, and he has erected a handsome six-storey building on the Curtain Road site, which is illustrated in the above initial letter. Mr. Robert P. Notley, F.R.I.B.A., was the architect, and the style adopted is the same as he carried out on the Charlotte Street extension nine years ago. It is artistic and imposing, but utility is the keynote throughout.

The new building adds about 15,000 ft. superficial area to the business premises. We may recall the fact that when the site was purchased about twenty years ago, a space between the Charlotte Street and Curtain Road frontages was filled with new laboratories. In 1902 the additional offices and warehouses in Charlotte Street were built, and now comes the Curtain Road building. All the three are *en suite*. The adaptation has enabled a good deal of straightening out to be done, if that term may be allowed in respect to bricks and mortar and all that they enclose. The 1893 building comprised the pharmaceutical laboratories and export packing department, with other accommodation. Now it is devoted solely to manufacturing tinctures and similar preparations, with an analytical department, of which Mr. Vivian Hewlett has the control. The laboratory has expanded beautifully, and opportunity has been taken to introduce a new tank for spirit, which is fixed into the wall, and is filled from the outside. The house has always had a big export trade in spirituous preparations under drawback, and Mr. Vivian Hewlett told us that he makes 900 alcohol estimations yearly. He has an ingenious mechanical balance arrangement for the spirit-distillate receiver : when the proper amount is collected the balance drops and rings a bell. This enables the worker to do something else when the spirit is distilling.

The export packing has been removed to the Curtain Road premises, and is reached by a slope to the left of which the ether house has been removed—outside all other buildings. The whole of the ground-floor (about 2,500 ft. area) is devoted to the export packing. It has offices for checking clerks and Revenue officers, and a recessed loading-way for vans, to obviate undue interference with street traffic. There is also a fire-protected emergency escape from an outer iron staircase in the rear which affords alternate escape in case of fire to this and adjoining buildings of the firm. Export packing departments are generally interesting to a *C. & D.* representative, and Hewlett's certainly is, for the packing-cases are like a corollary to the *C. & D.* circulation, which when reduced to towns abroad resembles a gazetteer. So do the goods in Hewlett's; and the fact that the present extension is due entirely to increase in the company's export business proves that enterprise has paid them.

The basement includes about 3,000 ft. super and is lofty and well lighted and ventilated by skylights and windows in the rear, also by high windows next the street, which were facilitated by raising the ground-floor above the sidewalk. The basement has fireproof separation from the rest of the building, and is carefully constructed so as to ensure dryness. Its purpose is to receive and store export goods, and it contains a well-ventilated strong-room about 24 ft. by 14 ft., which adds to fire and burglar proof storage for valuable drugs. There is also a capacious boiler-room and other accommodation. The strong-room is a novelty in some respects, though but four brick walls. Big quantities of quinine and peppermint oil were among the goods in it on our visit, and men were taking in 3 tons of carbolic acid. The boiler is for supplying the Curtain Road building only, but it can be used to supplement the steam-power for Charlotte Street when required. A large electric, brick-enclosed lift connects all floors, and is available generally for goods or specially for members of the firm and their visitors as passengers. It has a series of push-buttons for working on the outside on every floor, and with a second series of buttons in a lock-up case in the cage for use with authorised passengers. Every known provision is made for safety in working, and the controller, fixed above the topmost storey, is so arranged that current can only be put on by degrees and risk of fusion is lessened. On reaching the first floor we found a magnificently lighted apartment devoted to a showroom for sundries, surgical instruments, cameras, optical goods, etc., a department which the company have extended enormously during the past decade. The first photograph given above relieves us of description. On this floor there is also a fine board-room, beautifully furnished in oak, the table having upon it a brass plate stating when the first

A Glimpse in the Showroom.



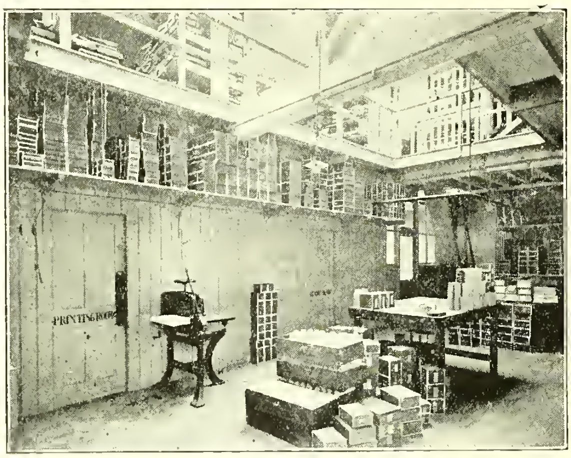
A Speciality Packing Floor.

board meeting was held in it, and who were present. A sundries buyers' office is also on the floor. The second floor above is a stock annexe to this department; here also a good deal of fitting is done, such as feeding-bottles and sprays. It is connected with the second floor of the Charlotte Street premises, where specialities are produced. There is more of this on the third floor of the Curtain Road premises (see p. 179), which is devoted to packing counter-specialities, and we noticed that those for South Africa have both English and Dutch labels. The company make a feature of packing Boer medicines with chemists' own names upon them, and they have many kinds of labels for the same article, so that each chemist may have a distinctive style for himself. Most labels are copper-plate engravings. Bottles and other supplies for the packers are brought by the slope from the next building. We went down this slope to get to the fine new pill and tablet room, a photograph of which is reproduced. A lot of additional machinery has been placed here, including an air-filtering and heating apparatus for the pill and tablet coating machinery. The temperature of the air can be varied at will, and the apparatus is provided with a sliding valve so as to reduce the air-supply or cut it off altogether. There is also a compressed-air pump for the gelatin-coaters. The machinery is driven by electric motors, with a graduated switch to regulate the speed. We noticed that the motors are enclosed in asbestos casing, which is also used for the drying-chambers. The machinery is all of English manufacture.

The fourth floor of the new building is one of the most interesting we have seen. Here there is an aseptic room for the preparation of sterilised surgical dressings, and care has been taken to construct it on the latest principles, so that floor, walls, ceiling, and other parts shall not harbour germs. An overhead chamber is provided wherein air is filtered, washed, and sterilised for admission to the aseptic room, and steam is laid on in two places for warming and for working aseptic apparatus. The printing-room is also on this floor, and next door to it is a label-room in which are systematically arranged hundreds of different kinds of labels for specialities. The company have 140 plates for Chinese labels alone. It may be noted that they have not yet touched the home trade with their packed specialities. It will be observed from the photograph that this floor is very high, and, not to waste space, galleries have been constructed for the store of cartons, boxes, and other light materials. This is a new feature to us, and a valuable one, since it adds considerably to the 9,000 ft. super of the four upper stories. We ascended to the roof, which gives a magnificent view of this district of London, now changing rapidly from a furniture to a motor centre.

Pill and Tablet Room.

Among other good points about the buildings we observed that special care has been taken with the separate sanitary arrangements for the sexes. The lavatory basins and sinks have been specially made with a view to cleanliness, simplicity, and obviating a useless number of traps, wastes, and other piping, so often put in connection with these things. Automatic panic-doors are provided on every floor for alternate means of escape from fire on all stories above the basement, and special means of escape are provided for the basement. The building is heated by means of a series of steam pipes on the ground storey, and the stories above from a steam boiler in the basement. There is telephonic communication between all departments and the directors' rooms. During our tour of the premises with Mr. Hewlett and Mr. Millard, the managing director, we noticed that there was no sign of emptiness about the new floors; on the contrary, there is difficulty in finding space for everything, although the fixtures are placed so as to leave merely average-sized gangways. It seems, therefore, that we may have occasion ere long to refer to further extensions and developments.



The Top Floor, showing Storage Galleries.

Trade Tabs.

Tungsten (wolfram) to the extent of 1,200 tons is produced by Portugal yearly.

In Portugal the principal firm of aërated-water manufacturers is British, says a Consular Report (No. 4688).

Trade-marks have absolutely no legal protection in Cuba unless they are specifically registered at the Ministry of Agriculture, Commerce, and Labour.

Commercial Travellers' Samples.—According to the British Consular Report for 1910, travellers' samples pay full duty on importation into Cuba, but a rebate of 75 per cent. is allowed if the samples are re-exported within ninety days and their value does not exceed 100*l*.

Lisbon imported in 1910 1,853,707 kilos. of copper sulphate, valued at 32,448*l*., mostly from Great Britain. The importation of chemical manures is falling off, probably owing to the output of chemical manures by the new factory of the Companhia Uniao Fabril at Barreiro.

Portuguese Cork-cutters succeeded towards the end of last year in getting the Government to put a prohibitive export-duty on sheets of cork less than 500 sq. cm. in size. Nevertheless the exports went up to 644,400*l*. in value last year, compared with 538,000*l*. in 1909. Portugal produces at present nearly half the cork used in the world—*i.e.*, about 75,000 metric tons per year out of a total production of about 158,000 tons, the rest being supplied by Algeria, Spain, France, Italy, and Tunis in the above order of importance.

Chemicals for Moscow.—We find the following paragraph in the British Consular Report (No. 4690) on trade of Moscow in 1910: "Another important indication of the direction and development of the Russian chemical industry is furnished by the extraordinary increase in the import of *salts of sulphuric acid, especially superphosphates*, which rose from about 32,000 tons in 1908 to about 64,000 tons in 1909, and about 113,000 tons in 1910 for eleven months only. This increase is due to (1) the increased use of artificial fertilisers; (2) the low duties compared with those on sulphuric acid; (3) the very low prices of superphosphates on the world market; and (4) the comparatively high price in Russia for sulphuric acid." The italics are ours, and need no comment.

Commercial and Produce Notes.

Lac Resin.

A considerable amount of attention is now being given in India to lac production. According to the "Report of the Agricultural Research Institute" of Pusa for 1909-10, the cultivation of the lac insect on *Zizyphus jujuba* and *Scrissa glomerula* is being carried on experimentally, and courses of training in lac production have been given to students and lac workers. A complete collection of races of the lac insect has also been made and arranged for investigation by tho Government Entomologist in Ceylon. In this connection reference should also be made to the issue of a second edition of Mr. Stebbing's important monograph on the lac insect in "Indian Forest Memoirs." This gives a complete account of the lac insect, its food-plants, natural enemies, distribution in India, and of the methods of cultivation and propagation. Later sections of the monograph deal with the exploitation of lac, the manufacture of various forms of lac resin, their industrial uses, composition, etc.

Shellac Manufacture.

The "Indian Trade Journal" reports that the proprietor of a large shellac factory at Jhalda, Bengal, has evinced a considerable interest in the Assistant Forest Chemist's wood-alcohol process for the manufacture of shellac. He had a model shellac apparatus constructed according to the plan described in the *C. & D.* several years ago, with a view to testing the economic value of the wood-alcohol process, and he has expressed the opinion that he has no doubt regarding the commercial possibilities of the process, and that it is of special use in the factory for the recovery of useful shellac from refuse shellac. From the scientific reports on the samples of shellac manufactured by the wood-alcohol process which have been received from England it appears (according to the annual report of the Board of Scientific Advice for India for 1909-10) that this shellac is as good as, if not better than, the best shellac of the market. The commercial firms, however, report that the form in which shellac was submitted to them was objected to by the trade, as the latter would appear to have taken a fancy to the extremely thin opaque flakes. The commercial firms are thus of opinion that the shellac extracted with wood alcohol should be converted before export into such forms as are already well known, otherwise it will have to be put on the market at considerably lower prices in the beginning than the best brands of shellac already exported from India. A new plant for the extraction is being constructed, and it is proposed to make fairly large quantities of shellac in a proper commercial form for exact valuation. In this apparatus use has been made of centrifugal force to separate by filtration dissolved lac resin from the sludgy impurities.

Drugs and Chemicals in Japan.

In the course of the annual report of the Yokohama Foreign Board of Trade for 1910 it is stated that "importers of drugs and chemicals during 1910 had still to suffer from the delays caused by the complicated methods involved in passing goods through the hygienic laboratories whenever it is necessary to obtain the Ph. J. III. stamp. Goods are often rejected for somewhat obscure reasons, and the absence of a means of appeal is severely felt, as the importer is left, as a rule, to face a loss for reasons which are not clear to him. Measures have been tried with a view to obviate this real grievance and remedy what is actually an impediment to the trade, and some improvement has certainly been noticeable. The manufacture of drugs and chemicals in Japan has made further progress, and in some cases the import of foreign goods has been considerably diminished; acetic acid, naphthalin, creolin, and insect-powder are cases in point. At the same time the growing industry must depend upon imports of many commodities, of which a large proportion must be of high-class quality, so that the future is by no means devoid of promise. The business brought to book in anticipation of the new tariff has not been of great importance, as most of the new rates show very little change on the former scale. There are but a few articles which suffer any appreciable advance in duty, the bulk of the changes being merely the placing of most items on a specific basis. Competition has been accentuated by the growing tendency of dealers to go in for direct importations. There would, of course, be no reason to deplore natural growth of competition in business; but in this instance it would appear that, in their anxiety to eliminate the foreign merchant, the Japanese importer has cut margins below the paying point, thus benefiting nobody. Another deplorable feature is the reckless way in which the credit system is being extended, rendering business more and more unprofitable and insecure."

Turkish Canary-seed.

In a recent issue of the journal of the British Chamber of Commerce of Turkey it is stated that the sudden drop in the market for canary-seed has been entirely due to extremely favourable weather, which has permitted the sowings to be put underground at the right season and under favourable conditions. About 75 per cent. of an average has already been sown, and the balance was expected to bo completed within a few days. This news brought out speculative holders as anxious sellers, and this brought about a sudden collapse in values. It is felt that when these speculative parcels—said to be between 7,000 to 8,000 bags in all—are disposed of prices will be firmer again, as it is not supposed that *bonâ-fide* holders who are regular dealers will sell at the lower level of prices. European buyers will again be in the market for their consuming requirements shortly, so that it is probable the slump will only be temporary. The stocks in Turkey are estimated not to exceed 35,000 bags, and probably much less. The new crop is now not far off, and the demand for the world's consumption in ordinary circumstances should be able to cope with this quantity. On the other hand, news with regard to the Morocco crop is good, and the position will depend considerably on the progress of the Turkish sowings. If all goes well with them and the consumption demand is slow, a continuation of the present lower level of prices may be seen; but should anything go wrong, then there is no saying to what degree prices may advance.

Thorium Nitrate.

After protracted negotiations, the "Berliner Tageblatt" learns that the endeavours of the European makers to bring about an increase in prices has failed. The cause of the great decline in prices is to be found in the contest between a French works, an Austrian factory, and the German manufacturers combined under the title of the thorium convention. Formerly only a few manufacturers were able to obtain supplies of monazite sand, but with the lapse of time a Hamburg firm and a Paris firm imported large quantities of the material into Europe and threw it on the market. An attempt was then made to put an end for some time to the over-production of monazite sand and to obtain better prices by the distribution of the production of nitrate of thorium among the various interested manufacturers. Success attended the efforts to divide the production of thorium, but it was not possible to restrict the over-production of monazite sand or the quantity in the market, so that the idea of maintaining prices for a long time could not be entertained. It has, moreover, been announced from Brazil that the Government intends in the near future to proceed to let a fresh lease of the State monazite lands, whereby a further inundation of Europe with monazite sand is to be expected.

Indian Government Quinine.

Considering the enormous demand for quinine in India, it might be thought, says "The Pioneer," that the Bengal cinchona plantation and factory would be in a flourishing state; but the contrary is the case. In the official year 1909-10 the production of quinine sulphate fell from about 36,620 lb. to 23,000 lb., and the total output of the factory, including cinchona febrifuge and residual alkaloids, was less than 25,509 lb., as against 43,901 lb. in the preceding year. The working of this State factory is certainly not creditable to the Government; the prices charged for the quinine produced are generally much higher than those ruling in the open market, and no reserves are kept up for an emergency. It is about time that an inquiry was instituted, with a view to improving both cultivation and manufacture, but no one seems particularly interested in the matter.

Synthetic Rubber.

Dr. Gerlach, director of the Continental Rubber and Gutta-percha Co., Hanover, has been giving his views on synthetic rubber before the Rubber Commission recently appointed by the German Colonial Agricultural Committee. After relating what had already been done by Harries and the Bayer Co., Dr. Gerlach confessed that he was very much surprised when bulk samples of synthetic rubber were placed before him which proved to possess the essential properties of high-grade material. The early specimens shown were unpromising, resembling leather in appearance, very inferior as regards elasticity, and resisting all attempts at vulcanisation. It was considered difficult to say what prospects there are of the new product competing with the natural rubber. The raw material of synthetic rubber is itself a manufactured article, the production of which on a large scale can only be undertaken by a few chemical firms. It was thought quite certain, however, that artificial rubber will eventually appear on the market as a commercial product. The business side of the problem was also referred to, and Dr. Gerlach pointed out that makers will take good care that the output is not on a scale sufficient to depress the price of rubber. In any case, producing costs will have to be considerably reduced before any serious competition with natural rubber is possible, though they are at present lower than is generally thought and by no means hopelessly high.

The Camera Agrumaria.

The annual report of this concern, which controls Italian citrate of lime and allied products, is now available, and covers the eleven months from January 1 to November 30, 1910, according to the law passed on July 17 last year. The report states that the situation in that period has improved notably. On January 1, 1910, the stocks of merchandise held in the warehouses recognised by the Camera were about 5,600 tons, made up of 5,281,707 kilos. of citrate of lime and 482,754 litres of concentrated lime-juice, of an estimated value of lire 8,969,229, based on the minimum price of lire 157.50 per ton. On November 30, 1910, about the same quantity was in the stores—viz., 5,504,110 kilos. of citrate and 206,731 litres of concentrated lime-juice, whose aggregate reduced value on the basis of lire 131.50 is placed at lire 7,287,189. To judge from the results secured in the first half of this year, the improvement which has become manifest should be still more marked during the current financial year, at the end of which the quantities in stock will probably be reduced to about 2,000 tons. The debit balances of the Camera with financial institutions on November 30 was lire 4,753,538, and is expected to be reduced this year to about two and a half million lire. The receipts having been insufficient to cover all expenses, the year 1910 closed with a deficit of lire 21,797, this comparing with lire 37,521 in the previous financial period. At the end of January 1910 the tax of the Camera, amounting to 2 per cent. (1.60 per cent. net) on the total of the sales, having been inadequate to cover outlays, it was raised to 3 per cent. (2.40 per cent. net). But the law endorsing this having only been enforced on August 14, 1910, the remaining months covering the financial period have not reflected the full benefit now derived from the new rate. The current financial year will undoubtedly bring better results, as the receipts from the tax on the basis of 2.40 per cent. on a turnover of lire 10,000,000 should yield the Camera lire 240,000.

Ammonia Sulphate.

Trade reports from France and Germany speak of the prospect of a further considerable increase in the consumption for this year, its use as a fertiliser being in some directions even preferred to that of nitrate of soda, in spite of the material difference in value. The home market, after having been rather weaker, has now assumed a somewhat steadier tone, with more inquiry for distant delivery. Consumptive trade prospects in the United States and in Japan are said to be very good, which countries have already absorbed in the early months of this year considerably more than at the same period last year. If the increasing output in this country continues to find a growing outlet abroad the maintenance of good prices would seem to be assured. Stocks in France are very much reduced, and a renewed advance in prices is anticipated there by merchants. The growth of Great Britain's exports so far this year, compared with former years, is shown thus:

January-May,	1906	... ... 89,214 tons
,,	1907	... ... 101,376 ,,
,,	1908	... ... 107,942 ,,
,,	1909	... ... 111,919 ,,
,,	1910	... ... 119,979 ,,
,,	1911	... ... 126,599 ,,

Californian Olive Oil.

Reports from California state that the importance of the olive crops is difficult to determine. Estimates of the 1909 crop varied from 650,000 to 900,000 gallons of oil, besides a quantity of fruit equal to from 250,000 to 800,000 gallons. The 1910 crop is estimated to have proved very good. The passing of the Pure Food Bill has done some good to the industry. Among the imported descriptions of olive oil, the French product has been to some extent shut out by keen Italian competition, the latter having been sold materially cheaper, while the outlet for this description is stimulated by the fact that the Italian colony in California is steadily growing. Cultivation is carried on in thirty-eight counties of California from the north of Shasta county to the Mexican frontier, and it is estimated that over 1,000 trees exist in each county, but there has been no extension of cultivation of recent years.

A Cinchona Disease.

Dr. A. Rant gives in "Mededeelingen uitgaande van het Departement van Landbouw" (1911, 13) a description of the fungoid disease "Djamoer œpas," especially as it affects cinchona. Two totally different diseases have been referred to by this name—viz., a fungoid leaf disease attacking various monocotyledons such as sugar-cane, and a second which attacks the stems and branches of various dicotyledons, and it is to the latter only that the name is now generally applied. It is caused by a mould, *Corticium javanicum*, Zimm., which attacks not only cinchona, but many cultivated plants, including tea, coffee, cocoa, cinnamon, indigo, etc. In the neighbourhood of Bandoeng and Buitenzorg Dr. Rant has now found it on seventy-seven varieties of sixty different plants, and it has also been observed in many other countries—*e.g.*, Java, Ceylon, Straits Settlements, Caucasus, and Kamerun. Dr. Rant has cultivated the fungus both on agar-agar and on suitable plants, and has proved that it exists in four different forms, viz.:

(1) *Corticium javanicum*, Zimm., a light rose-coloured or whitish incrustation appearing on the lower parts of branches, and which appears to be a fruit-bearing form of the fungus. Under this red larvæ were often found, but what part, if any, they play in the development of the disease is unknown.

(2) Small whitish lumps consisting of mould cells.

(3) A mycelium consisting of a web-like mass of glossy, white mould threads, living as a saprophyte.

(4) Occasionally in small cracks in barks, as the fruiting form of a mould which has been named *Necator decretus*, Massee. This is reddish in the interior, becomes wax-like towards the exterior, and differs considerably in shape on different plants.

As a general rule, *Necator* forms on the upper surfaces of the branches, while *Corticium javanicum* prefers the under surfaces. *Necator* is, however, comparatively seldom seen on cinchona, and never without *Corticium*. The fungus can be readily carried from one plant to another even of a different kind. Thus Dr. Rant has infected cinchona from tea, coffee, cocoa, etc. . . . Curiously enough, some plants seem quite immune, and one peculiar instance was noted of a thoroughly healthy specimen of *Ipomœa Nil*, Roth., growing as a climber over a very badly-infected cinchona hybrid. When cinchona is attacked the leaves gradually acquire autumn tints and finally die, often without falling off. On the branches brownish spots appear in which the cells have died, suggesting that the fungus eats its way into the plant, destroying certain cells and so breaking the ascending stream of sap. Two of the chief factors in promoting the growth of the disease are humidity and shade: the former probably because the stomata open wider and so offer easier access to the fungus when the atmosphere is moist, and the latter because shade increases the quantity of plant acids and an acid medium has been found to be a good material for the growth of the fungus.

Dr. Rant points out that as preventive measures it is important to avoid wet, cloudy, and confined districts for cultivating plants liable to attack. Rational pruning and removal of leaves, especially from the lower branches, should help to prevent excessive humidity. In this connection it is pointed out that *Cinchona Ledgeriana*, with its close habit of growth, is much more seriously affected than the more open-growing *C. succirubra*. Attempts should be made by natural selection and grafting to produce disease-resistant varieties. Diseased portions should be carefully cut away and burnt, and all dead matter should be destroyed. Dr. Rant doubts the efficacy of smearing with antiseptics as a remedy against this fungus, since in several cases he has found that it has been able to penetrate into the heart-wood, and in one case even into the pith, where, of course, antiseptics could have no effect on it. A bibliography of previous literature dealing with the disease, and several plates showing the four forms in which it appears on cinchona, is given by the author.

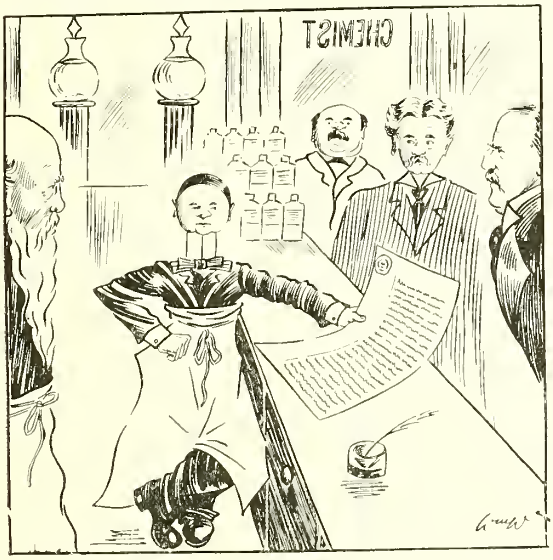
Soldering-salt.—According to de Voldere ("L'Union Pharmaceutique") ammoniacal zinc chloride is the best soldering-salt. It is prepared by mixing 883 grams of zinc chloride with 650 c.c. of ammonia (22° B.).

The Progress of Perk.

Artist and Rhymer join to show how a pharmacist was evolved.

II.

The Perkian Parent, cold, dispassionate,
Sapped by the unemotion of his trade
(An adept he in porcine butchery !),
Gathered the fragments of an errant son,
And (when court-plaster and the lapse of Time
His Offspring's normal visage had restored)
He hied with him unto the Apothecary.
"Behold," saith he, "a heaven-born scientist,
Who yearns to soar into the Empyrean
Of purest pharmacy." The bearded Sage
Suppressed a smile, and mildly named
A fruitful premium; for the path to Fame
Is easier when it's gilt.



Anon in state,
The new Indentures, duly signed and sealed,
Exultantly exhibited. And thus
Our Perk took that first fateful step
That led him from his test-tube to the task
Of pounding horse-balls, mixing divers paints,
Grinding Cape aloes, stirring greasy pans
Seething with unguents belching noisome smells.
Look on him well: the threshold of his life
Has just been crossed; in happy ignorance
Of youth he struts; and mark ye how he smirks
With pride on his first legal document.

. . . .

Alas ! the disillusionments to come :
The test-tubes—and resolves—that he must break
Before he even reach the Middle Way,
The path that points to Bloomsbury.

The Life of a Locum.

The word "locum," as used in pharmaceutical circles, is a pretty comprehensive one, as it embraces anyone who undertakes temporary work for chemists, from the young assistant who plans a pleasant summer of constant change of place, to the old retired chemist who hankers now and again for pestle and mortar and undertakes short spells of work for chemist friends. In this article I wish to treat particularly of the Minor man who, having reached, say, the age of thirty, decides to become a nomadic pharmacist, wandering from place to place, with no fixed abode save a corner in the goodwill of a wide circle of chemist proprietors.

Such an unsettled and unsettling life needs special qualifications, and, perchance, the first is inability to run a business of one's own, whether it be from lack of capital, distaste for settled routine, love of change, or what not. The second qualification—is it not that our bohemian pharmacist should be a bachelor? Marriage has terminated the career of many a brilliant young locum, as many chemists will testify. Other special qualifications that occur to me are: adaptability to environment, a strongly developed faculty of locality, complete contentment with one's own company of evenings, and a serene belief in one's ability to cope with any emergency, from acting father to the absent chemist's children to putting out a fire originated by the experimenting apprentice.

I almost fear to approach the difficult question of remuneration. It may vary according to the time of year. In August a host of chemists are hunting for a locum; in December a host of locums are hunting for a chemist requiring help. On an average a locum of good experience and character usually expects not less than two guineas a week indoors, together with his travelling expenses. In such a case he undertakes full responsibility; there are locums who temporarily fill assistants' places, and their fees are proportionately smaller. Again, a locum tends to visit a certain groove of business; thus one man may undertake to fill vacancies in quiet country businesses, another in the city drug-stores, another in select pharmacies, another in agricultural depots; he will soon learn the average run of payment that the particular type of chemist expects to pay for the services of a locum. A hard-and-fast rule is difficult to lay down. I have known fees varying from twenty-five shillings to three guineas, both indoors, and for the space of one week. The winter months are the bugbear of the locum, and many take temporary managerships or spend their winters pleasantly, if not very lucratively, with foreign chemists on the Riviera.

How does a locum form his connection? Chemist acquaintances, commercial travellers, and the *C. & D.* advertisement columns are the primary sources for finding vacancies. Both proprietor and locum do well to make some personal inquiries beforehand. On the whole it must be confessed that, justly or unjustly, locums have not an angelic reputation, hence an average steady man is in brisk demand, and having once proved his reliability is sure, under ordinary conditions, of a repetition of his services being solicited—often twelve months ahead. Commercial travellers are only too glad to recommend a trustworthy locum to their customers, thus gaining the gratitude of two people. Many wholesale houses, too, keep lists of locums they can personally recommend, and one is fortunate in getting on such a list. Of course, every live locum advertises in the *C. & D.* Supplement as long as he has vacant dates to fill.

By such means as here described the writer last season had every day booked from February to November, and from locum work went straight to a temporary post on the Continent. Several of the unsatisfactory features of the locum's life have been touched upon—his winter months of scanty employment, his solitary existence. But there is another feature that lends variety, if not enchantment, to the locum life—he may drop into unsatisfactory berths. A fellow locum of mine found himself in an unpleasant predicament when the pharmacist who had engaged him promptly fled the country to escape an avalanche of unpaid bills which proceeded to inundate the pharmacy, while the tearful wife besought the worthy locum to abide by the sinking vessel of drugs. Another locum has recounted how eerie a task it was to fill the place of a poor chemist who had committed suicide; while yet another deplored being left to the far-from-tender mercies of a servant who knew naught of the mystery of cooking, so that he subsisted on tinned foods for a whole fortnight. But such examples as these are exceptional cases; more often everything is arranged to make the locum's visit a happy memory, and the kindness one meets with is often most surprising and pleasing.

The first three days in a new shop are the worst. One has not yet accustomed oneself to the geography of the pharmacy, shop, or drug-room, and it is in this particular that one's faculty of localising is so essential. For example, you wildly search beneath the counter for the Epsom salts jar, sure that you had seen it there (you had—in the previous shop), and finally run the salts to earth in a specie-jar on the top shelf above the clock, yourself perspiring profusely and the customer fuming over with acid remarks, while the errand boy is covering himself with dirt in an attempt to discover the missing chemical among some drug-room refuse. Such an experience makes a locum resolve never to locum again except where a junior assistant is attached to the shop. But about the third day, when one has learnt the locality of the principal patents, chemicals, etc., one abandons the thought of nervous breakdown and feels surprised that one's equanimity has been disturbed at all. One has got into the run of things by that time, and has found the right side of the customers.

Which last item is the most important bit of gymnastics the locum must perform. Though businesses are often very personal, the locum, if tactful, should increase business, particularly in smaller towns, where a new face attracts customers by its novelty. "Fancy Mr. Smith gone for a holiday! What's the new man like?"

The successful business-increasing locum is generally a keen student of human nature; he learns to gauge his customer, and does not labour under the delusion that the villa resident appreciates the same mode of treatment as does the country farmer, and *vice versa*. A locum too often tends to develop a general formula of addressing customers, whereas at least twelve distinct varieties of treatment should be stored in his counter *répertoire*, and used as occasion demands. One needs to be very careful, and must never lose patience with the most exasperating customer, who may be the biggest buyer; and what will be the verdict of the returning chemist who finds his best customer driven away? Again, what locum has escaped the attentions of the zealous friend customer who "keeps his eye on things," as he says, which accounts possibly for the way in which he stares you up and down when he comes into the shop, which he does on all sorts of pretexts at all times in the day?

A locum has many pleasant experiences and makes many real friends, so that his nomadic life has increasing charms for him, and he settles down to a regular round of patrons.—*A. S. G.* (110/32).

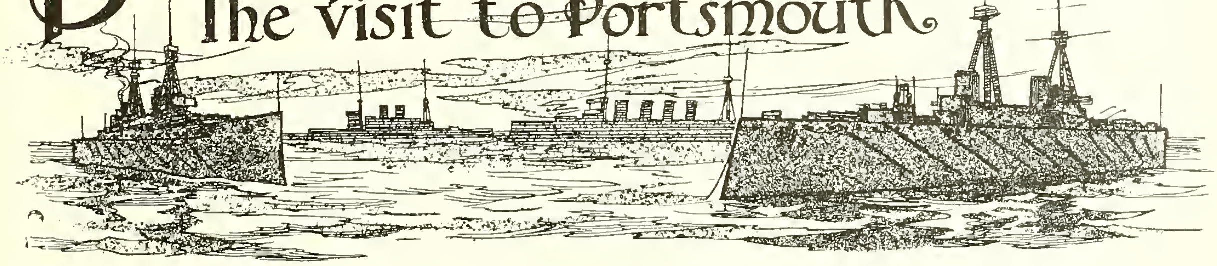
Edinburgh Shop Hours.

We are indebted to Mr. Robert Aitken, of Messrs. Baildon & Son, Edinburgh, for the loan of a table compiled about 1839 by the late Mr. H. C. Baildon, of the number of persons engaged in chemists' shops in Edinburgh and district "on the Sabbath Day" (as the original has it). From this we have selected the following particulars, which are of special interest at the present time in view of the consideration of the Shops Bill. The third column is the notable one, as it gives the numbers of persons, including masters, and, in some cases, "boys" and porters, engaged along with apprentices or assistants, on Sundays. The table is otherwise of great local interest, as indicating the numerous changes which have occurred in Edinburgh pharmacy.

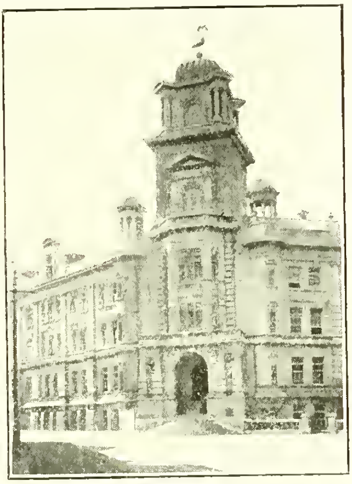
Masters	Assistants and Apprentices employed	Total Persons in Shops	Average duration of the attendance of each Assistant and Apprentice on the Sabbath Day
Airth, J., Morningside ...	—	1	—
Alexander, J. T., Char. Place...	1	2	10 hours
Alexander, T. & J., Grassmarket	2	5	6 hours
Allison, E. D., So. Bridge ...	5	11	—
Anderson, D., S. Canongate ..	5	1	—
Baildon, H. C., Princes Street	8	11	6 hours
,, ,, Leith	2	3	6 hours
Butler, T., Waterloo Place ...	1	3	—
Beath, J., Castle Street ...	2	3	6 hours
Brown, Mr., Rose Street ...	1	2	—
Cheyne & Siree, Manor Gate...	2	5	6 hours
Cowan, J. M., 30 Clerk Street	1	3	—
Cochrane, J., Lawnmarket ...	1	2	—
Cramb, W., 1 Hope Street ...	1	2	—
Croom, G., 12 Lothian Gate ...	1	2	9 hours
Campbell, Newington	1	2	—
Dickson, T., 7 Duke Street ...	1	2	—
Dickson, T., 10 Union Place ...	1	3	3 hours
Duncan & Flockhart	11	13	4 hours
Duncan, Flockhart & Powell, Leith	2	3	—
Duncan, T., Anthony Place ...	—	2	—
Davidson, High Street ...	—	1	—
Dempster, High Street ...	—	1	—
Dickson	—	—	-
Fletcher, N., 32 Howe Street...	—	1	—
Gardner, J., Geo. Street ...	2	4	6 hours
Glover, St. Pat. Square ...	1	2	—
Graham, 32 Bristo Street ..	2	3	9 hours
Grant, Mrs., Broughton Street	1	2	11 hours
Hatton, D., 24 Circus Place ...	2	3	—
Hyndman, A., 1 E. Richd. St	—	—	—
Hyndman, R., & Co., 4 D. Haugh Street	—	—	—
Imrie, Canongate	1	2	—
Jameson, G., 15 Howe Street ...	1	2	—
Jameson, D. Haugh Street ...	1	2	—
Jaap, R., 4 So. College Street...	1	2	—
Kemp & Co., 7 ,, ,, ...	—	—	—
Kennedy, C., 65 So. Bridge ...	2	3	—
Kinniburgh, Broughton Street	—	1	—
Lawrie, Jas., 46 Clerk Street ...	2	3	—
Lees, A., 34 Lothian Street ...	1	2	7 hours
Lindsay, R., Elm Row	4	6	—
McDonald & Co., Nicolson St.	1	3	—
,, L., Leith	1	1	—
,, T., 13 Catharine St.	1	2	7 hours
McKenzie, W., Leith	1	2	—
Marshall, A., 83 Shore, Leith...	1	2	—
Martin, J., 1 Adm. St. ,, ...	1	2	—
Milner, J. & R., 2 Duke Street	—	1	—
Milner, R., Leith	2	4	—
McFarlane, J. F., No. Bridge...	4	5	—
MacKay & Ferguson, Geo. St.	—	3	—
Marjoribanks, J., Castle Street	2	3	—
Matthews, W., 208 Canongate	—	1	—
Menzies, W., 8 Spence's Place	—	—	—
Mitchellhill, R., Downie Place	3	4	—
Moffatt, W., & Co., Nicolson St.	2	5	—
Middleton, Adam Street ...	3	4	—
McIntosh, Sciennes	—	—	—
Muir, ...	—	—	—
McGlashan, No. Bridge ...	—	3	—
McLean, D. Haugh Street ...	1	2	—
Mackie, Circus	—	—	—
Mayne, Brandon Street ...	—	—	—
Napier, Jas., 25 W. Nicolson St.	—	—	—
Oliver, Jas., Home Street ...	—	1	—
Pow, Jas., 3 Pitt Street ...	1	2	—
Pugh & Plews, Princes Street	7	10	—
,, ,, North Street .	7	9	—
Purves, J., 170 Pleasance ...	—	—	—
Robertson, Jas., Geo. Street ...	4	7	6 hours
Scott & Orr, 67 Pr. Street ...	5	6	—
Sibbald, J. R., Hope Street ...	2	4	6 hours
Smith, T. & H., 21 Duke Street	2	4	—
Smith, W., 58 So. Bridge ...	—	2	—
Stobie & Smith, Leith	1	3	—
Stringer, Mr., Calton Street ...	1	2	5½ hours
Snodgrass, Mr., Canongate ...	—	1	—
Thom, A., & Co., Queen Street	—	3	—
Tait, Bristo Street	—	1	—
Taylor, West Bow	1	3	12 hours
Tait, Mr., High Street ...	—	2	—
Thomson, Frederick Street ...	1	2	—
,, Greenside Street ...	2	3	8 hours
Urquhart, J., Leith	—	—	—
Wilkinson, J., 48 Hanor Street	3	4	—
Williamson, J., St. And. Sqr.	2	3	—
Young, W., 22 Downie Place...	—	1	—
Milner, High Street	1	2	—
Lumsden, Mr., Pleasance ...	—	1	—
Ker, Mr., Leith Street ...	1	2	6 hours
Carmichael, Mr., Leith ...	1	2	—
Murray, Mr., Leith	1	2	—
Archibald, Mr.	1	1	—
		250	

Probable number in 12 shops from which no return has been recd. ...	24	
Number of those occasionally employed, not included in above list	5	
		29
		279
Less 6 who do not attend on Sabbath		6
Total ...		273

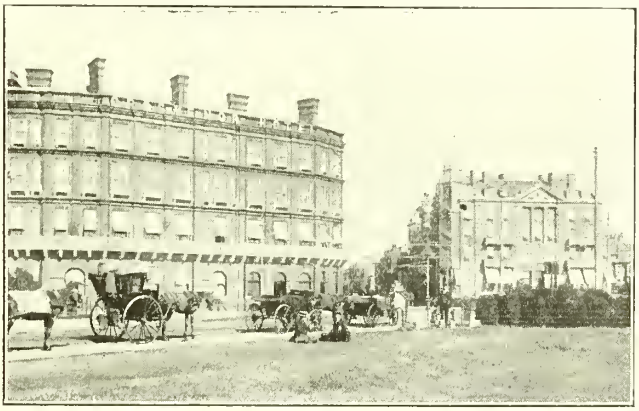
British Pharmaceutical Conference
The visit to Portsmouth



IN 1882, when the late Professor Attfield was called to the Presidential chair of the Conference, the meeting was held in Southampton. It is a coincidence that in this year of the Professor's death the Conference should again visit the district, for Portsmouth and Southampton are more closely in touch with each other than the distance between them leads one to suppose. Indeed, the suggestion that the meeting should be held in the great naval port came from Southampton. Portsmouth pharmacists, under the chairmanship of Mr. T. A. White, have risen to the occasion well. The Municipal Technical College was secured for the scientific meetings, added to on this occasion by the institution of a Practice Section, which commenced on Tuesday morning, July 25, when the President, Mr. W. F. Wells, of Dublin, took the chair. On the previous evening Alderman T. Scott Foster, J.P., Mayor of Portsmouth, gave a reception to meet Mr. Wells in the Town Hall—a magnificent building, of which a photograph was given in our issue of June 17. The Alderman's name occurs on the Register of Chemists and Druggists and of Dentists. Four sessions of meetings were held on the three succeeding days: Tuesday, at 9.30 A.M., when Mr. Wells gave his Presidential address, delegates were received and papers read; at 2.30 P.M., when the Practice Session was inaugurated, with Mr. John C. Umney in the chair. Here proprietary medicines and pharmaceutical education were the subjects on the programme. The third session was held at 9.30 A.M. on Wednesday. The same evening the members and many others met again in the Municipal College, where the Principal (Mr. Oliver Freeman) and staff gave a reception. All these happenings are reported in succeeding pages. The closing session of the Conference was held at the Esplanade Hotel on Thursday morning, and will be reported in our Coloured Supplement. At this session Edinburgh pharmacists invited the Conference to visit "Scotia's Darling Seat" for a third time next year, and Sir Edward Evans, J.P., of Liverpool, was elected President. The Jubilee Meeting is expected to be held in London in 1913. The rest of the Thursday, from noon up to about 8 o'clock, was to be spent in the Isle of Wight, each excursionist receiving from the Pharmacists' Committee there a reprint of the illustrated article which was published in the *C. & D.* of July 8. In the evening Mr. R. A. Robinson, D.L., J.P., was to preside at a smoking-concert given in the Esplanade Hotel. On Tuesday and Wednesday the lady visitors were well entertained by the Ladies' Committee, and sterner visitors had also their feasts of pleasure.



Municipal Technical College,
Where the meetings were held.



Grosvenor and Queen's Hotels.
The Queen's (on the right) is the Conference Headquarters.

We may recall that the Local Committee comprised the following gentlemen of Portsmouth and other towns in the neighbourhood and Isle of Wight:

Chairman.—T. A. White, Ph.C.

Vice-Chairmen.—T. H. Cruse, L. Beddow, D.Sc., W. A. Bell.

Hon. Treasurer.—G. Donaldson.

Hon. Local Secretary.—T. O. Barlow.

Hon. Assistant Secretary.—T. Postlethwaite.

Committee.—W. M. Adler, F. W. F. Arnaud, S. Arnold, A. Ashfield, W. R. Atterbury, C. H. Baker, H. W. Barford, P. L. Blakeley, J. E. Bonn, J. Bostock, W. H. Bown, A. Brown, W. Burr, H. J. Chase, J. Cooper, H. M. Corke, R. A. Cripps, G. W. Darling, W. T. Deeks, C. S. Davies, P. P. Davies, J. Dunning, H. Farrar, M. R. French, F. G. Foster, F. Gall, W. T. Gorfett, A. Gresswell, G. A. Harbin, W. Hills, A. H. Hoit, F. W. Hooper, G. Hunt, A. Millidge, —. Nusraw, H. H. Pollard, E. W Pollard, J. W. Rhodes, P. F. Ritchie, S. Rogers, E. Ruston, H. J. Sadler, L. R. Salt, W. J. S. Saul, E. H. Smith, W. O. Smith, C. A. Smith, Tenison Smith, A. B. Sparrow, P. G. Tremlett, R. Trist, W. R. D. White, H. H. Wilson, F. Woolings, Edward R. R. Wales, F. H. Waterhouse.

A group photograph of most of these gentlemen was printed in the *C. & D.* of March 4. The Ladies' Committee comprised:

Mrs. T. A. White (President), Mrs. Atterbury, Mrs. Barlow, Mrs. Brewis, Mrs. Baker, Mrs. Bown, the Misses Cruse, Mrs. Darling, Mrs. Edgar, Mrs. Gall, Mrs. Orme, Mrs. Postlethwaite, Mrs. Rogers, Mrs. Sparrow, Mrs. Tremlett, and Miss E. S. Hooper, B.Sc., Ph.C. (Secretary).

Portraits of these ladies were given in the *C. & D.*, June 17.

The Pharmacies & Pharmacists

CONSIDERABLE doubt exists concerning the origin of the town and name of Portsmouth, and to say that it is the place at the mouth of the port or harbour would perhaps be the simplest and most reasonable explanation. Probably the original stronghold was situated at Portchester, at the upper extremity of the harbour; then in course of time the natives began to use larger boats, and thus, no doubt to save time and the trouble of negotiating the mud-banks, established their settlement nearer the open sea.

Portsmouth in the past seems to have been made a mark for acts of revenge, pillage, and general slaughter. The Danes paid frequent surprise visits, but on one occasion (A.D. 503) the intruders were terribly worsted by the primitive navy led by Porth, this fact giving some historians ground for connecting the name of the town with the victor. In the fourteenth century the place was twice burned down by the French, so that the present visit of the British Pharmaceutical Conference, though less predatory and more friendly than those mentioned, is but one of a series of incursions upon the inhabitants.

Whatever Portsmouth may have been in the past, it is now a town with a population of 230,000, with noble buildings and beautiful open spaces, clean and healthy and up-to-date in every respect, particularly in matters of education and amusement. Its connection with the Royal Navy places Portsmouth beyond the range of comparison with other towns. The sailors in the streets, the uniforms of marines and regular forces, the tramp of the thousands of dockyardmen, and the coming and going of battleships in the Solent—these are some of the things that belong exclusively to Portsmouth.

In the process of development suburbs have sprung up, known respectively as Portsea, Landport, Southsea, Eastney, Milton, etc., some of them becoming larger and more populous than the parent town; but as they are now all comprised in the Borough of Portsmouth the visitor would be wise to ignore the divisions, as he will fail to distinguish the limits. It is pleasant to find that towards the progress of Portsmouth gentlemen connected with the drug-trade have contributed a conspicuous part. No better example of good citizenship could be found than that of the Fosters; three brothers, all chemists, were on the Municipal Council at the same time, and two of them have been Mayor. The present Chief Magistrate, Alderman T. Scott Foster, is occupying the civic chair for the third time, and as Chairman of Finance he has served the town well and won the gratitude of the inhabitants. His brother Mr. F. G. Foster, who has also been Mayor, comes prominently before the B.P.C. as Chairman of the Higher Education Committee, to whom the Conference is indebted for the use of the Municipal Technical College. Mr. Thos. Brewis, who has been in business in Fratton Road since 1888, has served on the Council for seventeen years, and has also been Chairman of the Guardians. More recently in partnership with Mr. J. W. McIntosh he has extended his connection by opening branches at Copnor and Milton.

We now come more directly to the task of describing the local pharmacies, and giving a few particulars of their proprietors. Portsea is the oldest and largest offshoot from Old Portsmouth, and comprises the dockyard in its area. Most of the traffic concentrates into Queen Street, and the business done is of a character that would compare strangely with that of fashionable Southsea. In pharmacy, however, the difference is not so marked, and Mr. Geo. Donaldson has a prosperous and historic concern on the corner of Cross Street, which was founded in 1825, thirty-three years before he was born in Portsmouth. He was apprenticed to Mr. W. H. Rastrick, 122 Queen Street, Portsea, and in 1877 came to London for more experience, returning in 1881 to manage Mr. Rastrick's business. Two years later Mr. Rastrick sold the business to Mr. W. R. Fowler, but Mr. Donaldson continued to manage, and having passed the Minor in 1888 he in 1889 joined Mr. Fowler in partnership under the title of Fowler & Donaldson. Mr. W. R. Fowler retired in 1893. Mr. Donaldson is bringing up two sons in the drug-trade, and the elder has just qualified. Mr. Donaldson is Treasurer of the B.P.C. local funds.

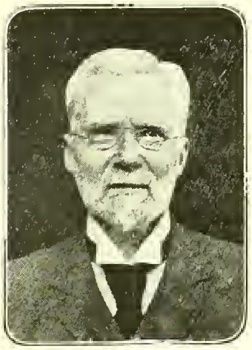
Mr. F. Gall, of 85 Arundel Street, claims the oldest chemist's business in Landport. It has been open continuously since the Crimean War, and the present proprietor has spent twenty-eight years in it. He is a gifted botanist, and we recall many interesting contributions from his pen. Another well-known Landport pharmacist is Mr. W. T. Gorfett, who is in business in Kingston Road. He was apprenticed to Mr. F. G. Foster and started on his own account in 1888, but instead of settling down to monotony he sold out, took a country business, and enjoyed village life. Then came a turn on the road until family reasons brought him back to Landport, where he settled again. He has earned considerable reputation as a Wesleyan local preacher, and his calls to Guildford, Winchester, and Portsmouth circuits monopolise his Sundays.

On the border-line of Southsea we come to Mr. Tremlett's "Fratton Bridge Pharmacy." Mr. Tremlett, who is a Portsmouth Grammar School boy, studied at the late Watson Will's College, and served assistantships at Bath, Hertford, London, and Woking. He is blessed with more than usual energy, from which the local Association benefits in his management of the Trade Section.

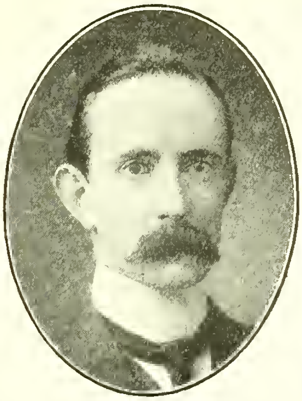
In the northern part of Southsea are the pharmacies of Messrs. Atterbury, Somers Road; Bown, Victoria Road, N.; and Postlethwaite and Rhodes in Fawcett Road, all active members of the Pharmacists' Association and responsible for a share of the Conference arrangements; while in the Albert Road and its continuation, Highland Road, leading to Eastney, Messrs. Trist, Eyres, Chase, Page, Harding, and Sparrow meet the demands of the district. Mr. Sparrow deserves special mention for his handsome establishment on The Broadway. Keen business instinct and artistic ability have enabled him to carry off several window-dressing prizes. He was educated at King Edward Grammar School, Stafford, and apprenticed to Messrs. Averill, of that town, remaining three years after as an assistant. Then he went to Mr. Tompsett, Anerley, S.E., passed the Minor in 1899, next obtained more experience with Messrs. Hooper & Co., Grosvenor Street, and Messrs. Savory & Moore, and managed the business at Cardiff under Court of Chancery *re* J. Munday, and was also with Mr. Hagon.

Space scarcely admits the mention of all the chemists' establishments of Greater Portsmouth, but as a final group we may take those of Messrs. Cruse & Co., Ltd., Mr. T. A. White, Mr. T. O. Barlow, and Mr. W. A. Bell. These are universally credited with being prosperous high-class concerns. Mr. T. H. Cruse was the first President, and Mr. T. A. White, the present head of the Portsmouth Pharmacists' Association. Mr. White is a Vice-President of the Conference, and Chairman of the Local Committee. He was educated at the Basingstoke Grammar School, and was apprenticed to Mr. Perry, in the same town. He studied for the Minor and Major examinations at the old Westminster College of Pharmacy, passing the Major in 1889. After terms of assistantship with Messrs. Jolly & Co., Curzon Street, Mayfair, and Messrs. Allen & Hanburys, Lombard Street,

(*Continued on page* 190)


Mr. Cruse.

Mr. White
(Chairman).


Mr. Barlow
(Secretary).

Mr. Postlethwaite
(Assistant Secretary).

Mr. E. H. Smith.

Mr. W. H. Bown.

Mr. A. B. Sparrow.

Mr. P. G. Tremlett.

Mr. G. Donaldson
(Treasurer).

Mr. S. Rogers.

Mr. T. Brewis.

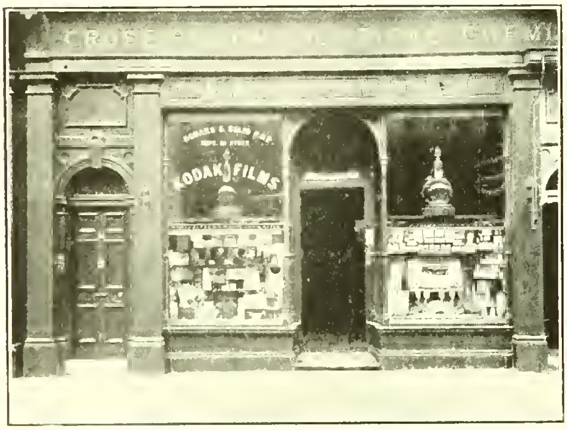
Mr. A. Gresswell.

Mr. S. Arnold.

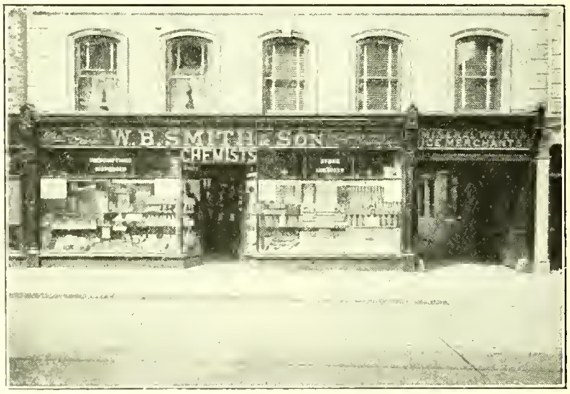
Mr. W. T. Gorfett.

Mr. W. A. Bell.

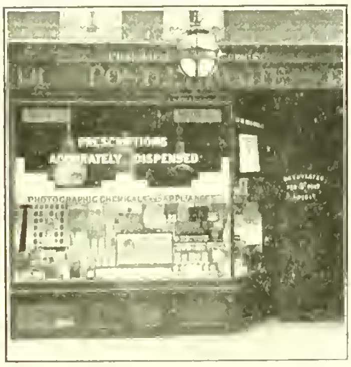
Mr. C. H. Baker.



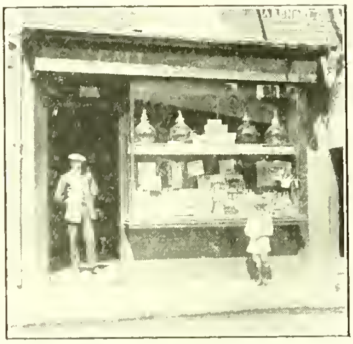
Pharmacy of Cruse & Co., Ltd.,
Palmerston Road.



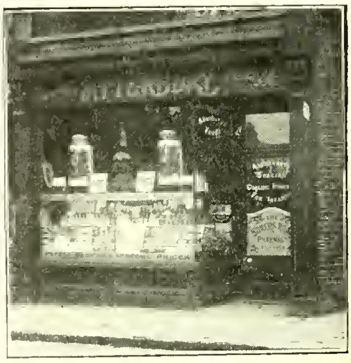
W. B. Smith & Son's Pharmacy,
47 High Street, Gosport.


PRESCRIPTIONS ACCURATELY DISPENSED
PHOTOGRAPHIC CHEMICALS & APPLIANCES

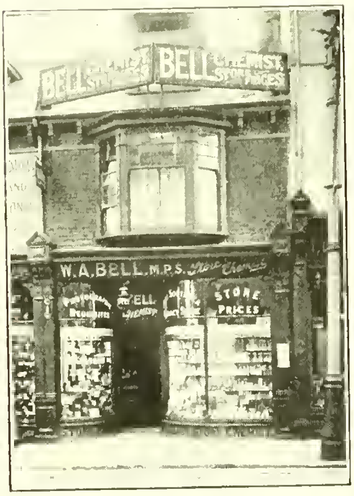
Mr. Postlethwaite's Pharmacy,
131 Fawcett Road, Southsea.



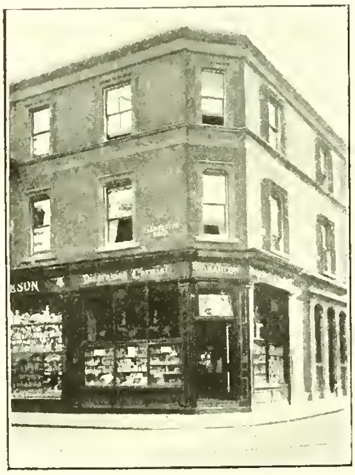
Mr. Gall's Pharmacy,
Arundel Street, Landport.



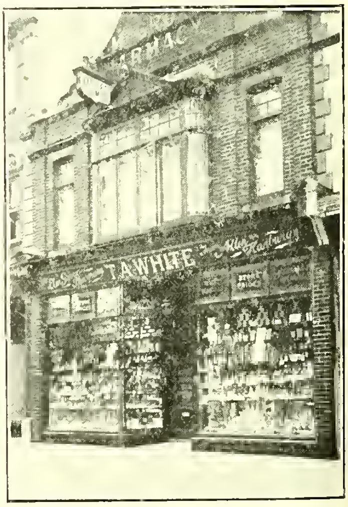
Mr. W. R. Atterbury's Pharmacy,
150 Somers Road, Southsea.



88 Clarendon Road, Southsea.



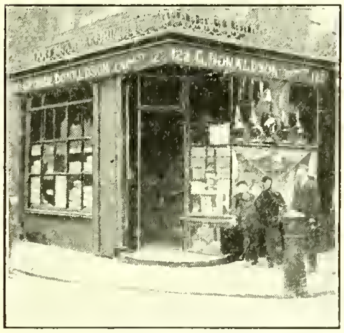
Mr. Barlow's Pharmacy,
Palmerston Road, Southsea.



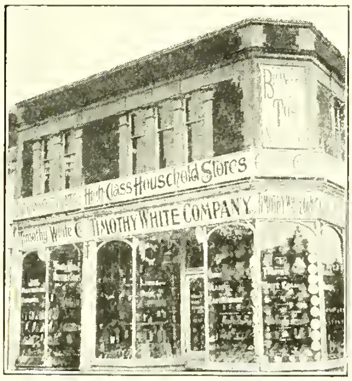
Elm Grove Pharmacy, Southsea.

PHARMACIES IN PORTSMOUTH AND NEIGHBOURING TOWNS.

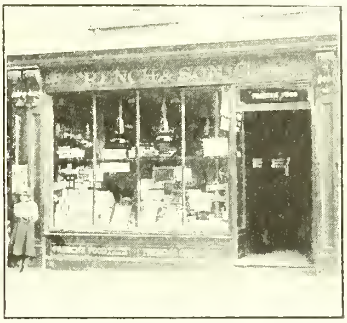
(Chiefly from Photographs by Mr. T. Postlethwaite, Ph.C.)



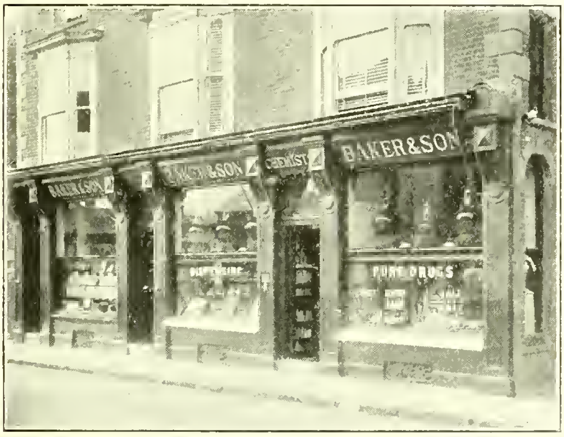
Mr. Donaldson's Pharmacy,
122 Queen Street, Portsea.



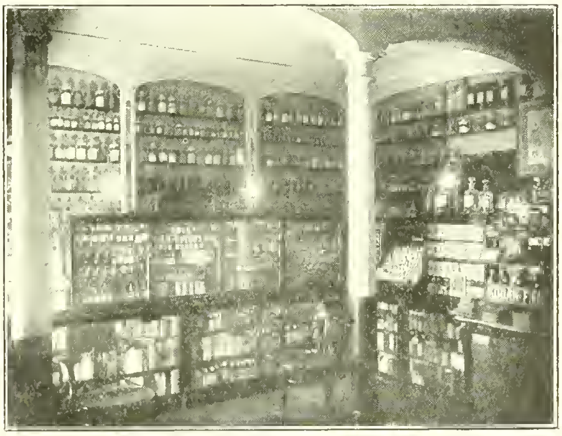
Timothy White Co.'s Portsea Branch.



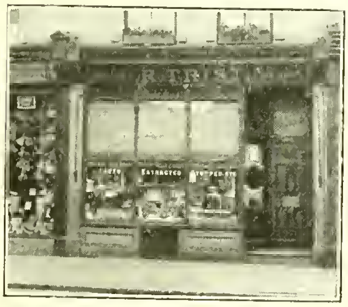
French & Son's Pharmacy,
95 North Street, Gosport.



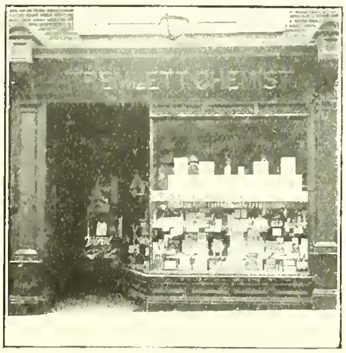
Baker & Son's Pharmacy, Cosham.



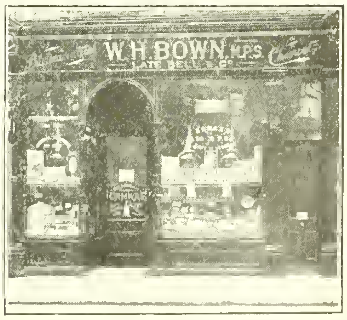
Interior of Messrs. Baker's Pharmacy.



Albert Road Pharmacy, Southsea.



Mr. Tremlett's Pharmacy,
Fratton Bridge.



Mr. Bown's Pharmacy,
50 Victoria Road.

PHARMACIES IN PORTSMOUTH AND NEIGHBOURING TOWNS.

(Chiefly from Photographs by Mr. T. Postlethwaite, Ph.C.)

he started on his own account at Winchester, taking over Mr. Allen's old-established business. Two years afterwards he purchased the Elm Grove Pharmacy, Southsea, then carried on by Mr. Naish at the King's Road end of the Grove. Finding those premises inadequate for his business, he moved in 1905 to his present magnificent pharmacy at 37 Elm Grove, where he has established an ideal dispensing and retail connection. He is a golfer and a Mason. Mr. W. A. Bell is the coming hope, being now Vice-President, and in the absence of his chief he has shown his skill in management of a large meeting. He does a fine business in a well-stocked pharmacy near the Strand. Other caterers for the *élite* are Mr. J. Cain, in Clarendon Road, and Messrs. Ford and Saul, in Palmerston Road. Mr. J. W. Rhodes is a Yorkshireman, and commenced his technical education at the Leeds School of Science and Yorkshire College, and studied for the Minor at the Metropolitan College, passing in 1896. After London and other experience he purchased his present business at 171 Fawcett Road, Southsea, in 1905, which had previously been carried on as a branch by Mr. T. A. White. Mr. W. R. Atterbury in 1905 bought the business of the late Mr. William Lowther in Somers Road. He was born at Oxshott, and served his apprenticeship with Mr. Peter Stacey, of Teddington, and was four years with Messrs. Jolley & Co., Mayfair, W. In common with his near neighbour, Mr. Tremlett, his recreation is largely piscatorial, and the pair, like other anglers, can probably tell of "whoppers" caught at Stokes Bay, their favourite hunting-ground.

Mr. W. R. Atterbury.

Mr. J. W. Rhodes.

Our last and most important subject for personal remarks, as far as Southsea is concerned, is Mr. T. O. Barlow, of 2 Palmerston Road. His colleagues describe him as a marvellous man. Running a dispensing business on ideal lines, he seems to have time to spare for everything, but time to waste for nothing. He is Hon. Local Secretary, and has worked like a Hercules. Mr. Barlow was apprenticed in 1891 to Mr. Harry Kemp, Manchester. While studying at Owens College for the Minor and Major he won the local Association prizes, the Entrance Scholarship, and the sessional prizes and medals. He was successively assistant at Mottershead's, Morson's, and Martindale's. The first pharmacy of which Mr. Barlow was proprietor was at Basingstoke, where he remained five years, but soon after bought the business of the late Mr. Sangster at Southsea.

Gosport, the nearest and largest of Portsmouth's neighbours, lies just across the harbour. It has a population of 30,000 and includes in its area the Royal Naval Hospital at Haslar, the Royal Marine Barracks, and the Clarence Victualling Yard. Scientific men will be interested in the reminder that John Cawte originated the Bessemer process at his foundry at Gosport. The historic pharmacy of W. B. Smith & Son in High Street was founded by the late Colonel C. Mumby. Mr. W. B. Smith went to him from Goole as assistant. Mr. E. H. Smith, who now owns the business, is a keen sportsman and golfer, he is good company, and is generally among the fun. Messrs. French & Son have long been in North Street, originally nearer the centre of the town than their present position. Other members of the craft are Mr. Kent at Forton, and Messrs. Day and Upson in Stoke Road.

A six-mile tram-ride from Gosport brings us to Fareham. We recently announced that Mr. W. O. Smith, West Street there, had disposed of his business to Mr. F. G. Foster, chemist and dentist, Lake Road, Portsmouth, to whom reference has already been made. Mr. Smith commenced business at Titchfield in 1879 as wholesale and retail chemist and mineral-water manufacturer, but in 1897 opened The Modern Pharmacy at Fareham. The mineral-water factory at Havant, started in 1900, was another of Mr. Smith's ventures. The other two pharmacies which Fareham possesses are old-established and have interesting histories. These are carried on respectively by the widow of the late Mr. A. E. Batchelor and by Mr. E. Neville. Mr. Neville's premises were originally opened as a branch of their Southampton business by Messrs. Randall & Son over a hundred years ago.

Mr. W. O. Smith.

Four miles to the north of Portsmouth is the small town of Cosham, possessing one pharmacy, that of Messrs. Baker & Son. Mr. C. H. Baker is a Londoner, and was apprenticed to his father, Mr. A. P. Baker, Westbourne Grove. On the death of his uncle at Cosham he went temporarily to assist in the difficulty, and like many temporary arrangements it developed into a permanent one.

Two miles further inland is the pretty suburb of Waterlooville, with Mr. W. B. Spencer as its pharmacist; and further eastward, at Havant, the brothers P. P. and C. S. Davies have the business for which such a good reputation was gained by Messrs. White and Chignell.

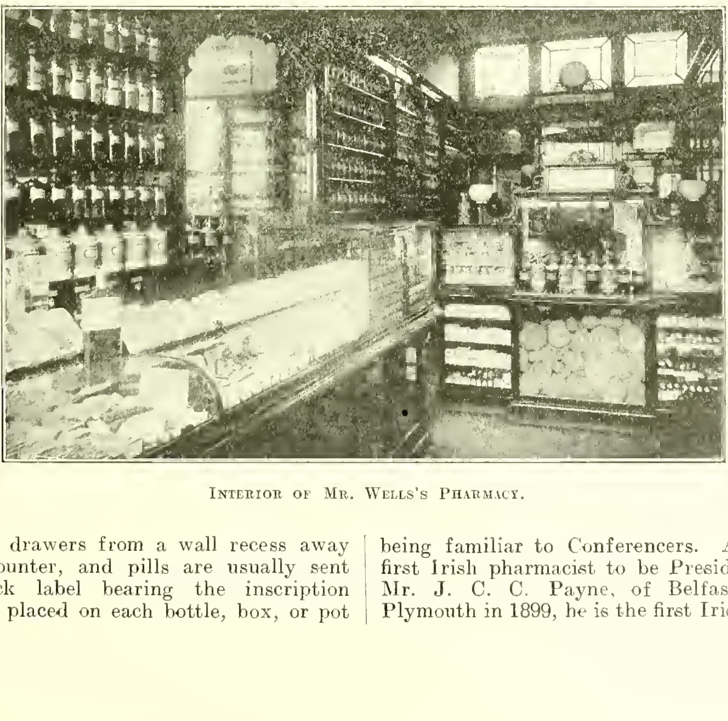
We may conclude these observations with some notes on two gentlemen who have been of great service to local pharmacists in the arrangements for the Conference — Mr. Oliver Freeman, Principal of the Technical College, and Dr. F. Beddow, the Vice-Principal, who is also a Vice-Chairman of the Local Committee. Mr. Freeman was appointed the first Principal of the Technical Institute at its opening in the old Municipal Buildings, Arundel Street, in 1894. With the passage of the Education Act, 1902, he became, in addition, the Organising Official for Higher Education. When the new Municipal College was opened in 1908 Mr. Freeman continued to fill the double office, and has held it until the present time. He is an Associate of the Royal College of Science and an Honours Graduate of London University. Dr. F. Beddow was educated in Liverpool and Derby, then at Edinburgh University, where he was demonstrator in the botanic laboratory. He graduated B.Sc. at Edinburgh, and five years later D.Sc., being medallist in chemistry. He also studied at Erlangen University, Germany, and Zürich University, Switzerland, doing research work on cobalt mine compounds, and graduated Doctor of Philosophy at Zürich. As a student of Caius College, Cambridge, for four years, he carried out research on the condensation products of phenol with Dr. Rhuemann.

Mr. Oliver Freeman.

The President & Presidential Address

Mr. WILLIAM FREDERICK WELLS, the President of the Conference, is one of the best-known pharmaceutical chemists in Ireland, and his knowledge of the laws affecting pharmacy in the Emerald Isle is second to no one's. Mr. Wells was born in Dublin in 1850, and was apprenticed to his father, a chemist and druggist, in Sackville Street, and subsequently helped in the management of the business, spending about nineteen years with his father. Mr. Wells then determined to start for himself, and opened a medical hall at 20 Upper Baggott Street. After being there for six years the lease lapsed, and the Earl of Pembroke renewed it on condition that Mr. Wells rebuilt the premises. This he did in a very handsome style, to his own design, in 1888, and the pharmacy may still claim to be one of the most handsomely fitted in Dublin. The depth of the premises from back to front is 200 ft. The retail counter and dispensing department have a depth of 57 ft. On the ground floor are the laboratory and bottle-store, while the drug and chemical store-rooms are overhead. Cleanliness and order, which are Mr. Wells's strong points, prevail everywhere. The dispensing of prescriptions has been reduced to a system which minimises chances of error and facilitates compounding. When a prescription is received in the front shop a docket is filled in with particulars of time received, when to be called for, or to where the medicine has to be sent. The ordinary docket is on white paper, the urgent form of it being on pink paper, with the word "Urgent" printed on it in large type. The prescription-book has its alphabetical designation and the consecutive number on each page, and in this the particulars as given on the docket are entered so that in case of subsequent inquiry the full history of the prescription can be readily revealed. The system works smoothly in practice, and helps to give customers confidence in the dispensing department. The pill-machines pull out like drawers from a wall recess away from the dispensing-counter, and pills are usually sent out silvered. A check label bearing the inscription "Fecit. W. F. W." is placed on each bottle, box, or pot sent out from the compounding department, each assistant having his special label bearing his initials.

Mr. W. F. Wells, Ph.C.
President British Pharmaceutical Conference.



Interior of Mr. Wells's Pharmacy.

The arrangement of the pharmacy and stock-rooms is as methodical as the dispensing-checks. When stock is received a label is affixed to it filled in with particulars of whence it came, date, quality, and cost. Not only is the stock labelled, but similar particulars are entered in a stock-book. Mr. Wells is a great believer in quality as applied to drugs and chemicals, and likes his customers to feel that they are obtaining a personal guarantee of quality in anything purchased at his establishment. The Royal Dublin Hospital is next door, and Mr. Wells holds the appointment of hospital apothecary. At the back of the premises Mr. Wells has an aërated-water factory. It is fitted with Riley's machinery, the factory and machines being maintained in a high state of cleanliness. Each syphon is cleaned and polished on the outside before being sent out, and care is taken that the bottom of the syphon is free from dirt—a point the housewife appreciates. The waters are happily named the "Wells," the trade-mark being the head of a well with the letter S in place of the bucket. Dublin water is delightfully soft, but contains traces of peaty matter, which are removed by passing the water through a Berkefeld filter.

Mr. Wells's entry into pharmaceutical politics began with his election to membership of the Pharmaceutical Society of Ireland in 1877, after passing the Licence examination. He became a member of the Council in 1882, Vice-President in 1891, and filled the position of President from 1895-7 and again in 1904-5. He took a prominent part in obtaining Parliamentary consent to the 1890 amending Act, and his services to Irish pharmacy were recognised in 1898 by the presentation to him of a silver rose-bowl and framed list of subscribers. Mr. Wells has a very clever family—his daughters' musical abilities being familiar to Conferencers. Although he is not the first Irish pharmacist to be President of the Conference, Mr. J. C. C. Payne, of Belfast, having presided at Plymouth in 1899, he is the first Irishman to hold the office.

THE PRESIDENTIAL ADDRESS.

By W. F. Wells, Pharmaceutical Chemist.

THE British Pharmaceutical Conference meets to-day to celebrate the forty-eighth anniversary of its foundation. We may claim that it has fully justified its existence, and that it has well carried out its functions—viz., "The encouragement of Pharmaceutical Research and the promotion of friendly intercourse and union among Pharmacists." That sentence is now indelibly written in the annals of British Pharmacy, and it recalls to me my first duty to express, on behalf of the members of the British Pharmaceutical Conference, our deep sense of the irreparable loss which British Pharmacy, and especially the Conference, has sustained through the death of the man who first wrote it in our records, John Attfield. He was one of the founders of the Conference, and senior Honorary Secretary from its foundation in 1863 until 1880, when the members presented him with 500 volumes of general literature as a token of appreciation of his great personal worth, and of the great work which he had done for pharmacy through the Conference. Professor Attfield served as President of the Conference for two years, in 1882 and 1883, he was one of the greatest lights in the scientific circles of pharmacy, a leader of men, with great ability and untiring energy in the cause of pharmacy. As a teacher he had great opportunities of bringing the best out of his pupils. How well he succeeded in this is seen by the positions many of them fill to-day. His personal pupils knew him best, but many thousands of young pharmacists came under his guidance through his well-known book, "Attfield's Chemistry." He has been called to his long rest full of years and honours, and those of us who had the great privilege of his friendship will never forget his genial personality and kindliness. His continuous love for the Conference was shown in his last message, received at the meeting last year :

John Attfield.

> "I had longed to be with the British Pharmaceutical Conference at Cambridge on July 25, but, alas ! neuritis imprisons me. I hope the assembly will be very successful."

We have ever before our eyes in the "Year Book" evidence of what the founders did for us, and of what the members are doing to carry out their ideals. Herein we find proof of the splendid research work done by its members ; while to see how fully it has been appreciated by others we have only to refer to the different editions of the British Pharmacopœia, the compilers of which have made liberal use of the valuable research and experimental work done by members of the Conference. As to its second object, those of us who have been attending the Conference for some years can best bear testimony to the many happy and lasting friendships formed at its meetings, and to the great value which the social and friendly reunions have been to us, whether viewed from a professional, business, or merely social standpoint. To-day we add another branch by inaugurating the "Practice Section," which it is hoped will make for the greater interest of the Conference, and induce more pharmacists to become members and supporters, both by subscribing to its funds and attending its annual meetings. Time alone can tell whether or not this change will be beneficial to the Conference, which has worked well for close on half-a-century, and we must carefully guard against the introduction of an undue amount of trading element which would tend to mar its original objects and lessen its value to the professional side of pharmacy.

The first difficulty which a President of this Conference meets with is to find a fitting subject for his address, and when one looks at the long list of names of past Presidents—men of high attainments in the pharmaceutical profession ; some great chemists, others learned botanists, and all eminent specialists in some or other branch of pharmacy ; men who have written on every possible subject that could furnish us with food for thought, leaving no new ground for their successors to cover—the task of saying something new becomes more and more difficult each year. I must claim your indulgence—if the subject of mine is not exactly new, I hope it will prove of special interest at the present time, which is probably one of the most momentous through which pharmacy has passed, having regard to the Shops Bill and the National Insurance Bill. If I can do nothing else I can prove the truth of the old adage : "There is nothing new under the sun."

Before proceeding further, I desire again to express to you how very highly I appreciate the great honour conferred upon me in electing me to the proud position of President of the British Pharmaceutical Conference. I regard it as a compliment to my country and to the pharmacists of Ireland, and I can assure you that my fellow-countrymen also fully appreciate the honour. This Conference is truly British, with its members representative of every part of our King's great Empire, drawn together by the bonds of mutual friendship and a desire to promote the best interests of our common calling—a calling of which, I fear, comparatively few outside our ranks realise the high importance, affecting, as it does, the well-being of so large a section of the human race.

Pharmacy.

It has been well said, "Every art must rest its claim for existence upon some great public want," and I know of no avocation to which the dictum is more applicable than that of pharmacy. This should be a very strong point in dealing with Pharmacy and Poisons laws, but it is one invariably overlooked, and by none so much as by the representatives of the Crown and our members of Parliament. The fact that the Pharmacy and Poisons laws of Great Britain and Ireland were, with one exception, passed —not for the benefit of the dispensing chemist, but solely for the protection of the King's subjects, is apparently not appreciated by the latter. In Germany every man, from the Emperor down, has to attain proficiency in a craft, and it is said that the present Emperor, like his father, is by trade a carpenter—a very suitable calling for those whose principal work consisted of building an Empire and making and repairing Cabinets ; it is a pity some such rule is not in force in this country. This is the age of Technical Education, and by all means in our power let us correspondingly educate our members of Parliament and the public ; let us lose no opportunity of so doing. If all our legislators had to learn a business or trade, how different our laws would be when made by practical men instead of lawyers and theorists ! If a qualification for the position of member of Parliament was that each aspirant had to spend a short time in a pharmacy, not, of course, taking any part in the work, but watching the pharmacist at his operations, he would soon learn some of the difficulties and worries that help to make up "the daily round and common task" of the pharmacist ; he would observe the nicety required in handling medicines, and realise the great danger lurking in the poisons cupboard if the pharmacist happened to be a little too liberal in his dispensing. With such knowledge he would better appreciate the value of the pharmacist, and be prepared to help and not hinder his work, by making laws to protect him and so ensure the public safety.

Had the old Scotch lady been aware of the danger of liberality she would not have thus supplicated the pharmacist when he was carefully weighing the calomel : "Dinna be sae stingy wi't, it's for a puir mitherless bairn" ; but this old lady is only a type of the public of to-day, many of whom fail to see that ours is a very momentous calling, and high above that of any business ; also that it is a profession second to none in its importance and vast responsibilities. When a serious illness invades the home how few persons hesitate to call in the best physician that money can procure, but also how many of them afterwards go to any cheap Jack or store for the medicine. Medical authorities tell us that many a valuable life is thus sacrificed by this craze for low prices and by the

Craze for Cheapness.

use of worthless drugs. Many of the public are unwilling to learn that there is such a great variety of qualities of drugs, and that many of those sold are worse than useless. The medicine is taken, and the physician is surprised when he does not get the expected result, and the least of the evil is that valuable time is lost.

Specialising.

We realise it more and more every day that a man to be successful in any calling must specialise. Take the medical profession of to-day. The old general practitioner who had supplanted the barber-surgeon of past times is gone; there is now the specialist in each branch of the medical profession, and the public go to him with the utmost confidence that he is best fitted to take the case in hand. Barristers, solicitors, and the representatives of almost every profession, who aim at coming to the front, must specialise. It is the same with manufacturers. All who hope to succeed must throw their whole soul into the branch of art or craft which they adopt, and this is especially true of pharmacy. "Jack of all trades and master of none" is an old saying; but it won't do to-day if you, as pharmacists, want success. The moment pharmacy is lowered to the level of a general business, as is being done so largely in our day by department stores and by limited companies of persons without any knowledge of pharmacy, whose sole object is to "make money—honestly, if ye can, but make money"—then the fine art of professional dispensing is lost, and in many cases the public health suffers. I do not, of course, want anyone to imagine that pharmacists wish to pose as philanthropists. Perhaps some can afford that luxury, but their number has always been restricted. One thing, however, is certain, and it is this, that when anyone asserts that he is running his business on philanthropic lines and selling his goods at a sacrifice, he should be well watched, especially by his wholesale friends. But it is wonderful how some of the public swallow the bait of getting something for nothing, and believe all they are told. As a learned judge on the Irish Bench said recently, "There is no sounding the depths of human credulity." The days of Aladdin and his wonderful lamp are still with us, not for little children but for grown-ups, many of whom believe implicitly modern fairy tales. This is specially true of drugs.

Poor Drugs.

What becomes of the tons of damaged and useless drugs that from time to time are placed on the market? Much of the stuff which is unsaleable in the British drug-market is, I believe, sent abroad, and yet finds its way back again, having been either cooked or redressed, to Great Britain and Ireland for consumption. Who is responsible for this state of affairs? The answer is the Boards of Guardians, Governors of institutions, and the public who insist on buying medicines at competitive prices at which we know they cannot be produced. It appears to me a cruel thing—I might go even further and say a criminal thing—for those who have in their hands the care of the sick poor in public institutions to purchase the supplies of medicines, putting price first, and too often without regard to quality or therapeutic value, the lowest tender being the one standard of merit. In Ireland the Local Government Board compel the Guardians of Unions to accept the lowest tender. When we want to build a house we advertise for a contractor, but we protect ourselves by stating that "the lowest or any tender is not necessarily accepted." I would, therefore, appeal to those in authority. Let them rely upon expert help—or purchase from vendors who have a good name at stake. Treat their medicines as they treat their tobacco and their wine purchases. Who buys tobacco or wines for personal consumption under a B.P. or any warranty as to the nicotine or the alcohol they contain, and under that guarantee give the order out to the firm that will take the least money? I ask Guardians and Infirmary Governors to use the same common sense in buying the medicines for their institutions—the qualities and characteristics of which they ostensibly can know but little—as they use in the purchase of their personal luxuries—namely, wines and tobacco—and buy the best they can afford, and not waste the public money in buying the cheapest that any unscrupulous dealer may offer.

Pharmacy Laws of the United Kingdom.

I now proceed to deal with my chief theme, and before I conclude I hope to contrast with ours the laws which regulate the practice of our friends in French and German pharmacy. I have stated that all the Pharmacy and Poisons Laws of Great Britain and Ireland were, with one exception, passed, not for the benefit of the chemist, but solely for the benefit and protection of the public. A reference to these laws will bear out this statement. The first Pharmacy and Poison Act that I know of was passed by the Irish Parliament in the reign of George III., known to us as the "Apothecaries Act," entitled "An Act for the more effectually preserving the health of his Majesty's subjects, for erecting an Apothecaries' Hall in the City of Dublin, and regulating the profession of an apothecary throughout the Kingdom of Ireland." The first section of this Act reads—

> "Whereas not only many but great inconveniences have arisen from the want of an hall amply supplied with medicines of the purest quality, prepared under the inspection of persons well skilled in the art and mystery of such preparations, but also frequently frauds and abuses have been imposed and practised on many of his Majesty's subjects within the City of Dublin and the liberties thereof, and in other parts of the Kingdom of Ireland, by the ignorance and unskilfulness of divers persons pretending to the art and mystery of an apothecary, to the injury of the fair trader, the disappointment of the physician, and the imminent hazard of the lives of his Majesty's faithful and loyal subjects throughout the realm."

The eighteenth section reads—

> "And inasmuch as many dangerous and fatal consequences have heretofore arisen from the practice of taking as apprentices to the art and mysteries of an apothecary, boys or persons disqualified by want of proper education to prepare or vend medicine, not being capable of learning their nature, differences, effects, and qualities, to the imminent hazard of the lives of his Majesty's faithful and loyal subjects . . . no person or persons shall be received, taken, indentured, or employed as an apprentice, foreman, or shopman, to any apothecary throughout the Kingdom of Ireland until he or they shall be examined . . . after such examination [the examiners] to certify that such person or persons so applying to them shall appear to such examiners properly qualified to become an apprentice or apprentices, journeyman or journeymen, to learn or transact the business of an apothecary."

The twenty-fifth is—

> "No apothecary within the Kingdom of Ireland shall have, take, receive, indent, or hire any apprentice to learn the art and mystery of an apothecary for a lesser time or term than seven years."

By Section 28 of the Act it is further enacted—

> "That no apothecary within the Kingdom of Ireland . . . shall grind, compound, sell or keep arsenic in the room where he compounds medicines, under a penalty of five pounds."

Section 30 tells us—

> "That every apothecary, druggist, or other such person selling any quantity less than one pound weight of arsenic shall at the time of such sale, and before delivery, enter in a book to be kept for that purpose the quantity sold and the time when it was so sold."

Public Safety.

To this is added the provisions for signature, etc., as in the Arsenic Act, 1851—with which we all are familiar—with, however, a 20*l.* penalty. This old Act of Parliament is very interesting. The one thought running through it is the safety and welfare of the public, and generally the object is to ensure the purity of medicines, which is the first and great object of this Conference. I have referred to this Act as a Pharmacy Act, and that is no doubt what it really was supposed to be. The function of the apothecary of that time was until the Medical Act of 1886 to keep open shop for the sale and dispensing of medicines. It is worthy of note that up to the passing of the Pharmacy Act (Ireland), 1875, the compounding of prescriptions was solely in the hands of the apothecaries in Ireland. Physicians or surgeons had no right to keep open shop for that purpose; indeed, the College of Physicians required their licentiates to make oath that they would not do so.

Next in order we have the Apothecaries Act, 1815

(55 Geo. III., 194), which is an Act for better regulating the practice of apothecaries throughout England and Wales.

English Apothecaries.

This Act is somewhat on the lines of the Irish Act, 1791, but Sections 2 and 3 give power to the master and wardens, or to persons properly qualified whom they may employ, to "go and enter into any shop or shops, house or houses, cellar or cellars," of any person using or exercising the art or mystery of apothecaries. They had power to search, survey, prove, and determine if the medicines, simple or compound, they should there find were wholesome and fit for the cure, health, and ease of his Majesty's subjects; and if they should find any unlawful, deceitful, stale, out of use, unwholesome, corrupt, unmedicinable, pernicious, or hurtful, they might burn or otherwise destroy them. In the City of London, and within seven miles thereof, they might be burned before the offender's door. Under Section 5 apothecaries are bound to compound or sell any medicines as directed by any prescription in the handwriting of any physician licensed by the Faculty of Physic in London, or by either of the Universities of Oxford or Cambridge under penalty of 5*l.* for first offence, 10*l.* for the second, and for third offence to forfeit his certificate. This Act is the only statute which protects any part of medical practice in England and Wales. Under it it is illegal to "act or practise as an apothecary." It has been laid down in the High Court that "an apothecary is a person who professes to judge of internal disease by its symptoms, and applies himself to cure that disease by medicine."

Arsenic Act.

The preambles of the Act of 1851, the next in order, "An Act to Regulate the Sale of Arsenic, 14 Vict., cap. 13," which applies to the United Kingdom, and with which we are all familiar, says: "*Whereas the unrestricted sale of arsenic facilitates the commission of crime.*" Under this Act the penalty is not to exceed twenty pounds. This Act was passed owing to an epidemic of secret poisoning by arsenic. We in Ireland were not free from the evil and had some notable cases; indeed, in those days arsenic seemed to be the simplest and easiest way of removing one's friend or foe and with very little chance of being found out. The preamble to the Pharmacy Act, 1852, is:

First Pharmacy Act.

> "Whereas it is expedient for the safety of the public that persons exercising the business or calling of pharmaceutical chemists in Great Britain should possess a competent, practical knowledge of pharmaceutical and general chemistry and other branches of useful knowledge."

This Act lays down the important principle that the education of the pharmaceutist is necessary for the public protection. In 1857 several notorious cases of poisoning came to light. To try to cope with the great evil the Government of the day brought in a Bill by which it was proposed to repeal the Sale of Arsenic Act and to apply its provisions to a great number of dangerous substances. No poison was to be sold to anyone other than a person of full age; a witness knowing the purchaser was to be present; and the purchaser was to produce a certificate signed either by a clergyman of the parish or district, by a legally qualified medical practitioner, or by a Justice of the Peace for the county or place, stating that the purchaser was known to the person signing such certificate, and might be trusted with a poison. A full entry of the sale was to be made. Packets containing poisons were to be wrapped in tinfoil as well as in paper, and bottles were to have the word "Poison" moulded upon them. Solid and liquid poisons were both to be coloured unless the certificate declared that such colouring would render the poison unfit for the purpose for which it was required. Vendors of poisons were to keep them under lock and key, and in certain vessels; and if they should be convicted of any failure to carry out the provisions of the Bill, they were to be fined 20*l.*, and on second offence were to be disabled for ever from selling poisons or carrying on the business of a chemist and druggist. Only persons qualified by examination were to sell poisons. And there was a power to enter and search any shop where poisons were sold to see if the regulations as to storage were duly obeyed. Before the Bill could be passed the Government went out of office. Towards the end of the same year, however, a terrible poisoning calamity occurred at Bradford. A druggist in that locality had supplied a local confectioner with arsenic in mistake. The confectioner used the arsenic in the manufacture of peppermint lozenges which were sold in the market; twenty persons lost their lives and over two hundred were made seriously ill. As a result of this fatality another Bill was introduced in 1859, but was withdrawn, in which power was proposed to be given to constables on the order of a magistrate to search any shop where poisons were sold, and penalties not exceeding 5*l.* for a first offence, 20*l.* for the second, and 100*l.* for any subsequent offence were prescribed in the case of convictions for any breach of the law.

Poison Legislation.

I mention these abortive Bills to show how very strong the feeling of the Government of the day was on the subject of poisons law, and it would appear that there was a great need for a stringent Act to cope with the great danger that existed in the free sale of poison.

Poisons and Pharmacy Acts.

We now come to the Act of 1868 to amend the Pharmacy Act of 1852, which begins with the usual "Whereas it is expedient for the safety of the public." This was the first Act to make it compulsory for the sellers of poisons to be qualified in Great Britain. In 1870 "The Sale of Poisons Act (Ireland)" was passed, which was practically Section 17 of the 1868 Act, with the addition of a clause (3) making the Adulteration Act extend to medicine. But under this Act anyone could sell poisons so long as they complied with the regulations.

In 1875 the Pharmacy Act (Ireland) was passed. It was a Government measure. The preambles, after referring to the Apothecaries Act, 1791, as "An Act for the more effectually preserving the health of his Majesty's subjects," says:

> "And whereas a great deficiency exists throughout Ireland of establishments and shops for the sale of medicines and compounding of prescriptions, and great inconveniences thereby arise to the public in many parts of the country."

This Act took away from the apothecaries the monopoly of compounding medical prescriptions and enabled all who qualified under the Act as pharmaceutical chemists to dispense medical prescriptions, and for the first time in Ireland confined the retail sale of poisons to qualified persons. The old chemists and druggists had their right to sell poisons reserved to them, but there was no power given to register them. This led to troubles later on. The Pharmacy Act (Ireland), 1875, Amendment Act, 1890, created a new grade—viz., "registered druggists" who were to be qualified by apprenticeship of four years and examination to sell and mix poisons (but not to compound prescriptions), while it provided for the registration of the old chemists and druggists.

A Contrast.

We see that in all these Acts of Parliament the one idea running through them is the protection and convenience of the public, the public health and the lives of the people being considered of paramount importance. We meet to-day for the first time in this, the greatest naval base of the world: we look around us and see the great warships and all the preparation for war, but we see written in big letters everywhere "Defence, not Defiance," and then we realise the enormous expenditure of money required to produce and keep up our great Navy, and as we think of its partner, the British Army, of both of which lines of defence we are all so proud, we ask ourselves is it possible that the Government keep up its Army and Navy simply to give employment to the vast number of its soldiers and sailors? The answer is, No: it does so because it is absolutely necessary for the public safety. Now none of the Pharmacy Acts says: It is necessary for the benefit of the pharmacist that certain laws should be made. The pharmacist only comes in, like the Army and Navy, to fill a public want; the people cannot live without him. It was not necessary he should be created—he already existed. The Pharmacy Acts then required that for the safety and

The 1908 Act.

protection of the people he should not only be educated and specially trained in his profession, but that he must be examined and proved competent to be entrusted with the onerous duties of his important calling; it was absolutely necessary that persons should be encouraged to qualify, and accordingly the Government said we, in return for your services to the public, will give you something, and in future only those persons who qualify will be allowed to sell poisons or compound prescriptions; but how has that compact been carried out? Let us see. I said that all the Poisons and Pharmacy Acts, with one exception, were passed for the protection of the public, and that one exception is "The Poison and Pharmacy Act, 1908." The Act itself, unlike all its predecessors, says nothing about safety, and gives no reason why it should see the light of day. In fact, by it the public safety is endangered. All the previous Acts recognise the fact that arsenic is a deadly and dangerous poison, and should only be handled by trained and competent persons. This Act says, in effect: "That is all nonsense. Arsenic is a harmless substance, and can be safely handled and sold with impunity by any ignorant and untrained person"—and thus the good work of years has been undone. It is well known that this Act of 1908 was passed at the instigation and for the benefit of a few interested wholesale manufacturers of poisonous specialities, who were able to command the Government support. We need only look at the Bluebook with the report of the Committee to see that this is so. When we asked for a safeguard to be put in the Act, it was stated that the local authorities might be trusted to do what was right, and would carry out the Act fairly and equitably, issuing licences only where there was a want so as not to interfere with the qualified persons. That, doubtless, was the intention of the Act; but it is a dangerous thing to put such power in the hands of the ignorant, the greedy, or the unscrupulous. What is our experience of the working of the Act? Speaking for Ireland, it is just what we anticipated, simply the repeal of the Pharmacy Acts as far as sales of poisons are concerned, and now we have practically free trade in poisons of the most deadly sorts without let or hindrance. Licences were granted to all comers and without any inquiry as to fitness of premises or of persons who were going to conduct the sales. As far as we have been able to ascertain in no case did the

> "Local authority take into consideration, before granting a licence, whether in the neighbourhood where the applicant for the licence carries on, or intends to carry on, business, the reasonable requirements of the public with respect to the purchase of such poisonous substances as aforesaid were satisfied."

The Licence Danger.

In fact, the senior standing counsel of the Pharmaceutical Society of Ireland advised that the words just quoted were in effect meaningless. It was pointed out to the Corporation of Dublin that in the case of every applicant for a licence there were one or more chemists selling agricultural poisons in the immediate vicinity of the premises of the applicant, yet every application was granted. Dublin City has over a hundred chemists in it, at least one-half of whom deal in agricultural poisons. The same thing occurred in nearly every other district in Ireland—applicants for licences were rarely, if ever, refused. Further, we do not know of a single place where an inspector has been appointed or where any attempt has been made by the local authorities to see that the regulations are carried out, they simply take the money and grant the licence and are done with the matter. Many of those to whom licences have been granted think that they are now entitled to sell all sorts of poisons, and are doing so; poisons are kept with other goods, are sold over the same counter as food; no attention is given to labelling, a poison-book is not in use. The police, whose duty it is to report breaches of the Acts to the Pharmaceutical Society of Ireland, are doing little or nothing to have the law respected. To add insult to injury, one person wrote to the Registrar of the Pharmaceutical Society of Ireland to say he had got a licence and wanted to know if the Council would now receive certificates of service with him from his apprentices to enable them to enter for the Registered Druggist examination. Another wrote to a wholesale house for a price-list, saying he had got a licence and was going to sell all sorts of poisons. This man kept a bicycle shop. What may we not yet expect?

How Ireland Suffers.

Arsenical Sheep-dips.

In dealing with this subject to-day, I want to look at it from the purely pharmaceutical side, without any regard to Imperial politics. I think you will agree with me that pharmacy owes very little to any Government or party. The system of making our laws is bad: we want business methods. Let the Government officials, before drafting a Bill, consult experts on the particular subject of the proposed Bill instead of law experts. What has been our experience? Is there any solid desire on the part of our law-makers to get inside information, or to see what is really for the good of the public? As an example, take the Poisons and Pharmacy Act, 1908, which was drafted for Great Britain only. Ireland was afterwards included—no one could tell why. The Irish Office in London did not know, and the Irish Office in Dublin knew nothing of it. The Privy Council Office of Great Britain did not want to have anything to say to Ireland in the matter, but in the final draft there was Ireland till the Earl of Crewe, acting for the Government, struck the reference to Ireland out, and said he would not include Ireland unless it was shown to be necessary after inquiry. A Committee of both Houses was appointed to take evidence and report on the subject. The President of the Pharmaceutical Society of Ireland wrote to the noble Chairman asking him to hear evidence on behalf of that Society. He replied that it was not intended to take any evidence from the Pharmaceutical Society of Ireland. On pressure being brought to bear he consented to hear two representatives, who, when they attended before the Committee, were not allowed to give any direct evidence. No latitude was given to them, such as was allowed to the witnesses hostile to pharmacy. There was no evidence by experts from the Veterinary Department of the Board of Agriculture of Ireland, the department that would know from practical experience whether it was necessary to extend the Bill to Ireland or not. The result was as anticipated from the outset. The Committee reported in favour of Ireland being included, and, as you all know, the second section of the Poisons and Pharmacy Act, 1908, applies to Ireland. The Committee was a farce, with very poor acting. I shall mention a fact which always strikes me as a most curious one in reference to this subject. In 1904 a "Departmental Committee on Dipping and Treatment of Sheep" made a report, as a result of which sheep-dipping was made compulsory in the United Kingdom. A perusal of the evidence annexed to the report is most interesting. The evidence indicates that sheep-dips containing arsenic are dangerous to the persons using them; to the sheep on which they are used; to other animals about the farm; to persons working and treating the wool, and even to persons using the articles made from wool on which arsenic was used in sheep-dipping. The Chairman of the Wool Trade Section of the Bradford Chamber of Commerce, in giving evidence before the Committe, was asked (Question 1589):

> "Have you any experience with reference to arsenious or other poisonous dips?"—"Yes, we have had an unfortunate experience with arsenic. It seems that arsenic, in certain processes that it has to go through, becomes insoluble, and when that happens it goes forward through all the processes of washing, scouring, dyeing, finishing, and all the processes that you can think of. In the case of Norway, they absolutely decline to take any goods that have practically any trace of arsenic whatsoever. So keen are they about this that they actually make it apply to carpets as well as to anything that can possibly come in contact with the skin."
>
> (1590) "Is it your opinion that that arsenic was introduced through the wool?"—"Yes."
>
> (1591) "Through the effect of the dips or the treatment of the wool previous to your dealing with it?"—"Yes, I have no doubt about it."
>
> (1592) "It could not have come in in any other process in the dyeing?"—"No."

It is an open secret that many members of the

Committee were in favour of prohibiting the use of arsenical dips altogether. The evidence given shows that there are other dips much more efficacious and perfectly safe. The report of the Committee bears out this statement. Following up this evidence, the Board of Agriculture of Great Britain published a leaflet with three "Prescriptions for Sheep-dips (approved by the Department) for Sheep Scab." The Irish Department adopted and published the same. None of these dips contained arsenic. On the second edition of the leaflet the following footnote was added :

> "Although no preparation containing arsenic has been included in the above-mentioned schedule, it is not to be assumed from the omission that arsenic dips are not thoroughly effective against sheep scab. The possible danger to human beings attendant upon the preparation of arsenical dips renders it advisable, however, that they should be compounded by qualified persons only."

In the face of all this, Mr. Russell, Vice-President of the Irish Agricultural Department, when giving evidence in favour of the extension of the Poisons and Pharmacy Bill to Ireland, was asked by Mr. Idris, M.P. (a member of the Committee) :

> "Why did you recommend these three (non-poisonous dips) first then? How was it?"—"Because of the difficulty of getting the arsenical dips," he replied.

And this in the face of evidence by wholesale traders that arsenical dips were freely sold by unregistered persons throughout Ireland. What we want to know is: Why the Poisons and Pharmacy Act, 1908, was ever passed; why this free trade in arsenic? The Department has, since the passing of the Act, given ample proof that it was not necessary by approving and publishing a list of a vast number of non-poisonous dips as being reliable and effectual for the prevention and cure of disease, dips that can be sold freely by any unregistered person. Arsenic in wall-papers in bygone days caused much illness. Its use in wall-papers is not now allowed. There is room for further inquiry as to the effects of arsenic in wool when worn as clothing. We occasionally hear of persons getting blood-poisoning from stockings. What causes it?

Arsenic too common.

Again, what effect has the lavish use of arsenical weed-killers in gardens and on streets? Thanks to a disastrous case of poisoning by arsenical beer which occurred some years ago in the North of England, the use of arsenical sulphuric acid is now prohibited in the preparation of cheap brewing-sugar. Still, danger lurks, and may remain undiscovered for long periods. The symptoms of arsenical poisoning simulate most completely ailments which are common to humanity, and unless suspicion be aroused numbers may be sent to their rest by this poison, and, as I have shown, have been in the past on many occasions without medical or chemical recognition of the true cause of the fatalities. Why, then, this callous indifference to sowing the country broadcast with tins and bottles of arsenic and other potent poisons, if only the formality of obtaining a licence be gone through? Let local authorities take warning and stay their hand before some national loss or disaster occurs to open their eyes to the danger of placing poisons in the hands of the unskilled.

Another Example of the Attitude of Governments and of Parliaments to the pharmaceutical profession have we in the "Report as to the Practice of Medicine and Surgery by Unqualified Persons in the United Kingdom," issued as a Blue-book by the Privy Council Office. The General Medical Council requested the Government to appoint a "Royal Commission" to inquire into this subject. Instead of granting the request and hearing all sides, in 1909 the Lord President of the Council requested the Local Government Board to "ascertain from Medical Officers of Health whether the practice of medicine and surgery by unqualified persons is assuming larger proportions in their districts, and what effects are produced by such practice on the health of their districts." This is surely a very large order and open to very wide construction. We are told that it is possible to prove anything by statistics, but here there are no statistics available, and the doctors seem to have got on very well without them. We may ask how Question No. 2—"Whether the practice is assuming larger proportions"—can be fairly answered without some data to go on. Now, if ever there was a one-sided inquiry, we have it here. I venture to say a more cruel, unjust, vicious, and misleading report never was published. The first words in the Summary of Replies are :

Quackery Blue-book.

> "Prescribing by chemists is stated to be so common as to be practically universal throughout the country."
>
> "In the replies received qualified and unqualified chemists are not always distinguished, but it would seem that the latter prescribe more recklessly than the former."

Well, this kind admission is something to be thankful for. A perusal of the Blue-book is enough to make one's blood boil. We may well ask, Has the Department that issued such a report any regard for common justice or fairness? The chemists are all unclean. Here you have between 16,000 and 17,000 qualified pharmacists, members of an honourable profession; men who, if they had not the confidence and respect of those among whom they live, could not succeed in their business, and they are placed in the dock with herbalists, bone-setters, and itinerant quacks, not tried, but condemned by an antagonistic jury, without process of law or the opportunity of a single word in self-defence. The result was a monstrous piece of injustice to honourable men. But who are the jury that condemn us? Many of them trade rivals of the men they stab in the dark, and many of them men who show themselves to be very small-minded indeed, and are only able to judge others by that little standard of self; they encroach on the chemists' preserves, and then the latter in self-defence retaliate. I think, also, a great injustice has been done to many of the medical men who sent in reports by the person who drew up the "Summary of Replies," for he has drawn conclusions from the replies that are not warranted by them. Let us take the first :

The Inquiry exonerated Chemists.

> "Prescribing by chemists is stated to be so common as to be practically universal throughout the country."

But what do the Medical Officers say in regard to this? From England and Wales there are 217 replies: 38 say "unqualified practice," "non-existent," or "practically non-existent"; 65 do not mention the chemist at all; 103 include the chemist, but many of them qualify the reply by :

> "Chemists only treat very minor complaints."
> "Prescribing by chemists probably less than in most towns."
> "A few chemists may prescribe."

From Scotland there are 97 replies, 63 of which do not mention the chemist; and from Ireland, where we find the most vicious replies, out of 137, 103 do not mention the chemist. Taking all the replies in 182 districts, it is stated the chemists do prescribe, and in 269 they are not named among those who are stated to do so, then add to the latter figures those who did not reply, it is shown that, if figures prove anything, it is that the statement "That prescribing by chemists is stated to be so common as to be practically universal throughout the country" is absolutely without foundation, and such a report should never have been sanctioned by the Privy Council Office and presented to both Houses of Parliament. Other of the deductions in summary are equally misleading.

But how do the public look at the matter? "Truth" says :

> "The question of counter-prescribing by chemists need hardly be made a matter for special legislation. It is more in the nature of a professional quarrel between the chemists and the doctors, for the medical practitioner who does his own dispensing can hardly complain if the chemist occasionally prescribes a pill or a draught to the man who comes to him and asks for a remedy for some simple ailment."

Professor Huxley once asked :

> "Is a man who has a sudden attack of pain in tooth or stomach not to be permitted to go to the nearest druggist's shop for something that will relieve him? The notion is preposterous. But the question is really not worth discussing, as it would be utterly impracticable to stop the practice over the counter, even if it were desirable."

Now, I don't want to be misunderstood. I have no sympathy with unqualified practice of either medicine or pharmacy, and in saying this I believe I am only expressing the views of every member of this Conference. The

The Chemist's Rights.

problem is a difficult one, but there is only one solution of it: Let the doctors give up dispensing, and things will soon right themselves. How is the unfortunate chemist to live who seldom or never sees a prescription after all the expense of qualifying? It is a crime, according to the Blue-book, for him to recommend infants' food, soothing-syrup, teething-powders, or even to sell a toothache-cure. We can hardly think that any great number of medical men will approve of the sweeping charges made against chemists generally. In many places the best of good feeling exists between the two professions—this is especially so where the medical men confine themselves to writing prescriptions, and in return the chemists act loyally towards them. We hope that this good feeling may not only continue, but extend till it is universal. We look with confidence to the Joint Committee of the British Medical Association and the Conference to help towards this great end.

Having thus shown the intentions of the Legislature as to our Poison and Pharmacy laws, I desire now, for comparison, to give you some particulars of the French and German laws regulating the same subjects. As you are all so familiar with the British Acts, and time being an object, I shall not specifically refer to them, but shall content myself with a short *resume* of the Irish Act, to show the differences in the practice of pharmacy in the several countries, and show how the laws of these countries operate both in the interest of the public and the pharmacist.

Irish Pharmacy Acts.

The Pharmacy Act (Ireland), 1875, was drafted very much on the lines of the British Pharmacy Act, 1868. There is, however, one very important difference—viz., that the compounding of all medical prescriptions, whether they contain poisons or not, is confined to qualified persons. Then we in Ireland have taken more out of our Act than our British *confreres*. By Section 16 the Council of the Pharmaceutical Society of Ireland are given power, subject to the provisions of the Act, to make regulations with respect to its meetings, examinations, and other matters necessary to the carrying out of the Act. The last sentence of the section reads: "Generally for all such other matters as may be necessary for the due execution of this Act." It is a curious fact that there is not one word about apprenticeship in the Act, but the clause referred to was found sufficiently wide to enable the Council to pass a by-law requiring a four-years' apprenticeship. This was ratified by the Lord Lieutenant in Council, and thus had the force and effect of the Act. A compulsory curriculum was instituted, and as a natural corollary the Society opened schools of chemistry, materia medica, and botany to give the necessary education to students. The following are the regulations for candidates for the qualification of licentiate of the Pharmaceutical Society of Ireland:

Preliminary Examination.

To be passed prior to four years' service at pharmacy. The subjects are Latin, English, arithmetic, algebra, geometry, elementary theoretical chemistry. The candidate must pass in one of the following optional subjects: Elementary physics and mechanics, the rudiments of botany, French, German, or any modern language.

A candidate who obtains 70 per cent. of total marks, and not less than 50 per cent. in each subject, is awarded a pass with honours.

The Licence Examination.

The candidate must be twenty-one years of age and produce a declaration that he or she has served a *bonâ-fide* engagement for a term of four years as apprentice or assistant with and in the sole employment of a pharmaceutical chemist, chemist and druggist of Great Britain, or an apothecary, or a firm of legally qualified pharmaceutical chemists, chemists and druggists of Great Britain, or apothecaries, in an open shop, and the candidate must spend the business day with his employer. This latter part of the regulation became necessary owing to candidates spending a few hours daily with a pharmaceutical chemist and then getting the necessary declaration of service.

The candidate must have attended a course of practical chemistry of not less than three months' duration in the laboratory of an approved institution, and have actually worked at the bench for 100 hours; also a course of lectures on botany and materia medica at some school recognised by the Pharmaceutical Society.

There is also an examination for assistants to pharmaceutical chemists, and such assistants as shall pass this examination shall be competent to transact the business of a licentiate of the Pharmaceutical Society in his temporary absence, but shall not be entitled to conduct a business or to keep open shop on their own account. The candidates must have been engaged at practical pharmacy for at least four years.

Pharmacy in France and Germany.

I am indebted to the Editor of The Chemist and Druggist for obtaining for me from the French and German correspondents of that journal the latest information regarding the training and examinations that pharmacists have to go through in France and Germany, as well as particulars in regard to the sale of medicaments, the dispensing of prescriptions, and other duties that ordinarily fall to the pharmacist.

French Pharmacy Law.

The essential difference in principle between the pharmacy laws of the United Kingdom and those of France is that the French laws, which date back to the Revolution and whose foundations were laid long before then, give the pharmacist a definite place in the community, specific services to perform for the community, and ensure that none shall poach upon the preserves fenced by these laws. No one can enter pharmacy as an apprentice until he or she has gone through the first French University grade and obtained the baccalauréat, which is a degree in Arts usually obtained by persons between the ages of sixteen and eighteen years. It is equivalent to, but not quite so high as, our degree of B.A. Since November 1, 1910, it has been necessary for apprentices to take a course of study lasting five years, consisting of one year's apprenticeship in a pharmacy, and four years at a school of pharmacy—the latter involving sixteen quarterly courses of study and practical work. Each year the apprentice has to pass an examination. Three of the examinations are of a preliminary nature, and, finally, in order to obtain the diploma of a pharmacien, the student has to pass a professional examination which comprises subjects more scientific and of a quasi-medical nature, since they include the analysis of food and drugs, bacteriology, and certain departments of public health—a circumstance due to the fact that in France, as well as in other parts of the Continent, pharmacists relieve physicians of certain work which physicians tenaciously stick to in this country, such as pathological tests, while they also perform work that is here relegated to public analysts. In 1909 changes were made in the qualifying examination, ensuring not only that the pharmacien is a pharmacist, but is also accomplished in professional subjects allied to pharmacy.

Dispensing Prescriptions.

The French law confers on pharmacists the sole right of dispensing medical prescriptions, the only exception being that in remote villages, where no pharmacists are in business, doctors are allowed to dispense medicines. Medicines can only be dispensed by qualified men, so that in a small pharmacy, the proprietor of which alone is qualified, in case of his absence, prescriptions have to, or ought to, await his return. Prosecutions take place from time to time for contravening this regulation.

Sale of Medicines.

The legal arrangements in France are that the retail sale of drugs, medicines, and allied products connected with the art of healing are exclusively confined to qualified pharmacists holding the French diploma. A medicament is considered "any substance, simple or compound, having medicinal qualities and presented as such"—that is, the destination or the use characterises a medicament. The same substance prepared for another purpose may no longer be considered as a medicament. This does not apply to poisons.

The proper working and management of pharmacies is under the supervision of pharmacy inspectors, and the law regarding their functions was revised in 1905. The business of the inspectors is to interpret the law in a fair spirit, without applying the text too rigorously. They take samples of doubtful products for analysis, and prosecutions are instituted in case of fraud. The pharmacist must keep a register in which all the prescriptions he dispenses are copied. According to French law, a pharmacist can own one pharmacy only, but he can take a partner or partners. Patent medicines (*i.e.*, secret remedies) are a somewhat sore point with French pharmacists. Legally their sale is prohibited, but in practice that is impossible, and they sell very largely; such sale, however, is confined to pharmacists, and cannot be encroached on by grocers, etc., as in Great Britain. The chief objection of pharmacists, naturally, is that patent medicines injure legitimate dispensing and leave very little profit. For a good many years past attempts have been made to come to some practical arrangement for securing a reasonable profit on such preparations, but so far without general and definite satisfaction being obtained. There is no patent-medicine stamp in France. The attempts which are made to keep foreign patent medicines out of France are also interesting. Foreign makers frequently get over the difficulty of being prohibited from importing their goods by manufacturing in this country—*i.e.*, France.

The French people are noted for their attachment to simples, and the pharmacy laws provide for the sale of herbs by herbalists, but this business is of a non-pharmaceutical nature, and there is no pretence on the part of herbalists to ape pharmacists by the way they carry on business. They are there to meet a public want, and make no pretence to be other than they seem.

German Pharmacy Laws.

In Germany the practice of pharmacy is strictly confined to apothekers, and a custom exists there which is unknown either here or in France, of strictly limiting the number of pharmacies, each pharmacy throughout the Empire being licensed by the State. The consequence is that an apotheker cannot start business as such until a vacancy for a pharmacy occurs and he obtains or purchases the concession to carry on the business of an old-established pharmacy or to open a new one where the growth of the population warrants, the State granting a new concession.

Apothekers and Druggists

The sale of all medicines is restricted solely to the pharmacists, subject to the regulations regarding the sale of remedial agents. In the course of time, however, a breach was laid in this privilege and the druggists (*drogisten*) began to appear on the scene. "Druggist" is a designation that any person may assume; there is no examination, licensing, etc., required to open a druggist's shop. The druggists, as such, do not enjoy any privileges, and what they do can be done by any other tradesman, only they have become the natural competitors of the pharmacist on several points. Thus it is permitted to sell outside the pharmacy tincture of valerian, spirit of ether, etc., but otherwise no *mixture* of any kind. Also they are allowed to sell zinc ointment for animals only, and to circumvent the law many have ingeniously printed inside the cover of the box a statement to the effect that "although this ointment is sold for the use of animals, it is just as good as that obtainable in the pharmacy." In addition they sell chemicals, but, strictly speaking, they are not allowed to sell them if they are demanded for use as a remedy. They also sell practically all the patent foods on the market, and constantly proceedings are taken against druggists to establish whether a preparation is a food or a medicine; if it is the former the druggist may sell it; if the latter he is forbidden to do so. Thus Scott's Emulsion has figured frequently in these cases. And often one court decides differently from another, so that in one town a druggist may sell a preparation which he is forbidden to do in another part of the country. The druggist sells, in addition, groceries, photographic articles, toilet requisites, sponges, soaps, colours, chemicals, infants' foods, fly-catchers, etc.; in fact, his business is made up of what figures largely among the British chemist's counter sales, many of these being sold by pharmacists in Germany. The druggists are largely recruited from apothekers who despair of obtaining a concession after waiting to buy a privileged pharmacy.

Dispensing

As stated above, the dispensing may only be done by apothekers. The doctors are also forbidden to dispense, and have been fined for illegal dispensing, but are permitted to make injections and the like. They have to purchase ready-made solutions in a pharmacy and pay for them according to the official prescription tariff like anybody else. All prescriptions have to be made up in a pharmacy, entered in a book kept for this purpose, and charged according to the official prescription tariff; the prescription is returned to the client. The pharmacist has to see that the doctor has not overstepped the maximum dose for potent drugs mentioned in the Pharmacopœia, or otherwise made an appalling mistake, in which case he must communicate with the prescriber; or, if this is not possible, reduce the dose and inform the prescriber of the step he has taken. The repetition of prescriptions is regulated by special provisions; in some cases it is forbidden to repeat a prescription calling for certain potent drugs unless it is signed each time by a medical man.

Educational Requirements.

As regards education and qualification, the apprentice pharmacist has to produce a certificate showing that he has attended a higher school (gymnasium or real-gymnasium) for eight years and has studied Latin. Armed with this certificate he may become an apprentice in a regular pharmacy. Apprenticeship lasts for three years, but in the case of those who have had ten years' schooling and have passed the Matriculation examination the apprenticeship is reduced to two years. During this time the apprentice has to study chemistry, physics, botany, pharmacognosy, pharmacy proper and pharmacy law, he has to make a certain number of preparations and write an official account on the subject, and, in addition, has to make a collection of dried plants. At the end of apprenticeship he goes up for the first examination, which used to be called the Assistant examination. This resembles the Minor examination of Great Britain, and includes written work and practical work on the same lines as is the case in England. When this examination has been passed, the candidate has to spend two years as assistant in pharmacies and is not in a position to act as manager or do anything independent. He may, in certain cases, take the place of his principal for a few days, but it would be a punishable offence for him to act as a locum-tenens. At the end of the two years of assistantship the man enters the university for a period of two years. Here he has to attend lectures on chemistry, botany, physics, pharmaceutical chemistry, analytical chemistry, and pharmacognosy. At the same time he has to do a lot of practical work in the chemical and botanical laboratory. In the chemical laboratory the whole course of analysis is worked through, and one has to make various preparations in addition; the analytical work embraces qualitative, quantitative, and volumetric analyses, and also the analysis of various substances for poisons. In botany one goes through a course of microscopic work, in addition to the practical work in pharmacognosy, which also deals with the microscopic analysis of powdered drugs, in view of the requirements of the Pharmacopœia. A course on sterilisation has also to be attended. Of course the conditions of study at a German university differ materially from those in an English institution, and must be taken into consideration. At the end of the time the pharmacist has to go up for the State examination. This lasts over a week and consists of written work and practical tests. The latter include the preparation of two chemical bodies, a qualitative, a quantitative, and a volumetric analysis, in addition to the hunt for a poison in some substance given to the candidate. The other oral examinations bear on pharmaceutical, botanical, and physical subjects. If the candidate is successful (his official title is by now "candidate of pharmacy," and he puts this on his visiting cards) he is not yet quite finished, for the actual diploma of having passed the State examination is not delivered into his hands by the Ministry of the country in which he passed it until one year has elapsed, and he has to produce a certificate regarding his conduct as an assistant during this time. In possession of his diploma, he is now a full-fledged apotheker; he may wait about twenty years for a concession, working as an assistant, or if he can win the heart of a moneyed maiden, dazzled by the prospect of playing the Frau Apotheker (in Germany the wife is always addressed by her husband's title), he may buy for anything up to 50,000*l.* a privileged pharmacy.

From the foregoing it will be apparent that the interests of the pharmacien and apotheker are well looked after by the State, and the fact that the sale and dispensing of medicine, whether simply innocuous or poisonous, is strictly confined to pharmacists, and there are such provisions in regard to industrial requirements as to ensure the liberty of the subject consistent with the safety of the community. Might not the British Government, with advantage, take a lesson from our French and German neighbours and when importing German-made insurance schemes go a little further and include an order for a pharmacy law "made in Germany"?

Other Matters for Consideration.

Had time permitted I would have liked to contrast the differences between the British and Continental military pharmaceutical services. Whereas with us there is no recognition by our army authorities of the statutory conditions enforced by the Pharmacy Acts for the dispensing of medical prescriptions, it is a first principle in the armies of France, Germany, Austria, Hungary, the United States, and other nations that those who enter their armies to perform pharmaceutical services shall first have conformed to the State regulations for qualification as a pharmacist. Whereas our army authorities are a law unto themselves in this matter, the armies of the rest of the world are law-abiding on pharmaceutical affairs, their dispensers being first certified to be competent to perform their professional duties, and they rank as officers in their armies.

Food and Drugs.

There are several other Acts which are closely associated with pharmacy, the most important of which are the Sale of Food and Drugs Acts, in which there is much room for improvement. I will only mention two points. The Acts should be amended so as to make conviction more certain when fraud is clear; at present there are too many technical points available under which offenders get off. Public Health Committees are put to considerable trouble and expense, all to no purpose. Doctors, surgeries, public institutions, and all other places from which medicines are supplied to the public should be brought within the scope of the Acts.

Personal Qualification.

I have referred to the different laws which govern pharmacy in the United Kingdom, and have shown the object the legislators had in view. We are sadly aware how their good intentions have been frustrated. How great a blow was the decision of the superior Courts in the case of the "Pharmaceutical Society *v.* The London and Provincial Supply Association, Ltd." I have been informed by members of the legal profession that in law it was a bad decision. It may, however, be law, but it does not appear to us to be justice. To the lay mind it was an extraordinary decision, for there could be no doubt, from the context of the Act, as to what the legislator intended—viz., a personal qualification for all those keeping open shop. What a far-reaching effect that decision has had on our profession! I am convinced from long experience of the working of the Irish Pharmacy Laws that nothing short of the personal qualification of the owner of a pharmacy gives any real guarantee to the public. Our experience is that in many cases the unqualified owner, most likely a man who has failed to pass the examination, conducts the business, and the qualified man is merely a cover with no power or control, and frequently he may not be on the premises. It is not a question of preventing free trade, as some suppose, but of lawful and just protection. The State demands, and rightly so, education, skill, qualification, examination, and registration, and having done that those who have complied with the demand may surely ask for a fair share of protection.

I would that we had a closer bond between all those connected with pharmacy in the United Kingdom; our interests are identical, from the apprentice to the employer. What Napoleon said of his army, that "Every private soldier carries a marshal's baton in his knapsack," is equally true of pharmacy; the assistant of to-day is the employer of to-morrow. Many forget this and are forging rods to punish themselves. What has done more to injure pharmacy than limited companies of unqualified persons trading as chemists? We want no active Parliament to stop this if every pharmacist was loyal to himself and his fellows; shorter hours and a little better pay induce many to sell their services to the unqualified: their highest ambition is 2*l.* 10*s.* a week, and the marshal's baton is left in the knapsack. It is a curious fact that the educated pharmacist is one of the few who act the traitor. Take any tradesman who joins his society, he will starve himself and his family before he will act disloyally to his fellow-workers, and though we may not approve of all his actions we must respect him for this loyalty. Let our assistants remember that their action is undermining true pharmacy. If only our assistants, when forming associations for their mutual benefit, would make the first plank "Loyalty to our craft," they would find it a very sure foundation to build on and for their own future prosperity.

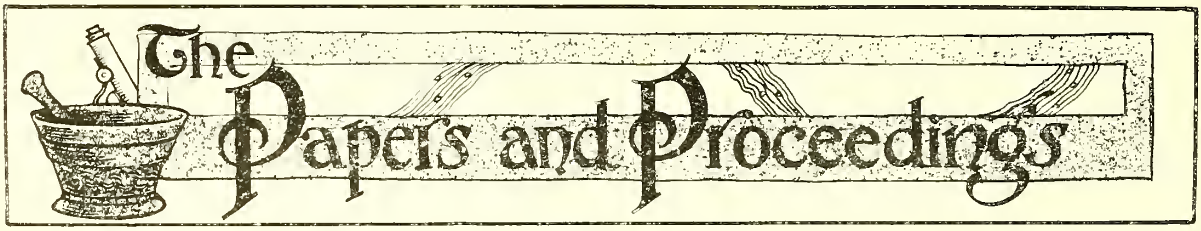
Looking at pharmacy to-day the prospects look dark, with the Shops Bill and the National Insurance Bill before us, especially the latter, which, if passed in its present form, will certainly injure many a pharmacist, and will be specially hurtful to those in country places. We may well ask: "Is life worth living?" Is pharmacy, as a profession, likely to improve, and are the conditions and emoluments good enough to induce educated young men to take it up as a calling, and to follow it as their life's work? Don't think I am pessimistic: I like to look at the bright side of life, but we must take things as we find them and try our level best to improve our calling, bearing in mind that we must leave it either better or worse for our connection with it, and remembering that, while there is this great craze for low prices, there are very many of the public in every grade of life who do appreciate the work of the pharmacist, and willingly pay for his services and for high-grade medicines. It is due to these and such as these, the discriminating members of the public, that our old historic pharmacies built their reputation and that others are doing likewise to-day. So let us take courage and follow in the footsteps of our old historic leaders, each doing his little best, and hope for better and brighter days.

"Shadow and sun—so, too, our lives are made.
Yet think how great the sun, how small the shade."

The Next President.

Sir Edward Evans, J.P.

The gentleman who succeeds Mr. Wells in the presidency of the Conference is a director of Evans Sons Lescher & Webb, Ltd., wholesale druggists and manufacturing chemists, Liverpool, and one of the warmest supporters of the Conference. He is so well known in Scotland (where he was educated) that when the visit to Edinburgh was determined upon leading pharmacists there said, "With Sir Edward Evans as Chairman it will be a success." Sir Edward is a publicist of note, and is Chairman of the Committee of the National Liberal Federation.



The Papers and Proceedings

THE first function of the Portsmouth Conference on the evening of July 24 followed many a precedent in taking the form of a municipal reception. The stately and splendidly situated Town Hall has never had within its walls at one time so many chemists nor guests who more appreciated the splendid hospitality of the premier naval port of the United Kingdom. The Mayor (Alderman T. Scott Foster, J.P.), with the President of the British Pharmaceutical Conference, Mr. W. F. Wells, and Mrs. Wells, received the visitors. There were between 250 and 300 present, and the visitors were representative of all parts of the country. From Ireland the President was accompanied by Sir William Baxter, President of the Pharmaceutical Society of Ireland, and from further north was Mr. I. W. Nicholls, Belfast, a constant visitor to the Conference. Scotland was poorly represented, but the capital was in the hands of Mr. T. Stephenson, and Mr. W. F. Hay represented the Granite City. The British Society were not much in evidence. Mr. R. A. Robinson, and an ex-Councillor, Mr. A. E. Hobbs, bore the honours for the occasion, and Mr. Woolcock represented the permanent staff of the Society. Most of the Conference officials were there, and the Local Committee, with Mr. T. A. White (Chairman) and the Secretaries, Mr. T. O. Barlow and Mr. T. Postlethwaite, was almost at full strength. Past-Presidents present were Mr. F. Ransom, Mr. W. A. H. Naylor, and Mr. T. H. W. Idris, and, although not at the reception, the veteran, Mr. S. R. Atkins, is attending the Conference. The Treasurer, Mr. J. C. Umney, displayed his ample presence, and the more compact Secretaries, Mr. E. Saville Peck and Mr. H. Finnemore, were everywhere shaking hands and renewing acquaintances. Manchester again sends a good number of representatives, these including Mr. Johnstone, Mr. Harry Kemp, Mr. Pidd, and Mr. Cleworth. Miss Buchanan was there from London, and memories were revived by the presence of Mrs. Watson-Will, who is staying with the Chairman of the Local Committee. London has sent a number of her citizens, these including Mr. I. Bourdas, Mr. J. C. Pentney, Mr. C. A. Hill, Mr. W. L. Howie, Mr. R. Feaver Clarke, Mr. E. Cresswell, Mr. F. W. Ashton, Mr. T. Maben, Mr. E. F. Harrison, and Mr. E. T. Brewis. Oxford, Cambridge, Exeter, and most of the other important cities of the Kingdom were represented among the guests. A band played during the evening in the great hall, but perhaps the most appreciated feature of the reception was the opportunity given for inspecting the valuable Corporation plate and ancient charters. The plate was displayed on tables in the Grand Jury Room, and each cup, salt-cellar, or mace was ticketed with an historic note. The oldest piece of plate in the fine collection is a cup known as the Bodkin cup, which bears the hall-mark of 1525-6. The Charters date from 1313, and are carefully mounted and glazed in wall-cases. Refreshments were served with a lavish hand, and towards 9 o'clock the Mayor gave a welcome to the Conference in a short speech. He referred to the importance of Portsmouth, which would be more apparent to visitors when they came to see the naval organisation of the port. They would find ships representative of all British types. There is the *Victory*, the only ancient three-decker in existence, as well as the latest Dreadnought type, as seen in the *King George V.*, which is to be launched in September. The Mayor welcomed the visitors, and hoped that the papers will be instructive and the meetings conducted in an orderly manner. (Laughter.) Mr. Wells acknowledged the kindly words of the Mayor and the princely hospitality of the Borough. Each guest received a memento booklet of the Dickens Museum from the Mayor.

Tuesday's Proceedings.

"Sunny Southsea" was at its best on Tuesday morning. A shower of rain, the first since the Coronation, had fallen during the night, and had given a freshness to the air. The sessions are held in the Municipal College—a beautiful building by the side of the magnificent Town Hall. A series of rooms has been placed at the disposal of the Conference, including a room for the use of the ladies, while the Great Hall is reserved for the meetings. This hall is a handsome apartment, lofty and airy, and affords plenty of space for the whole of the members who congregate on special occasions, such as the opening and closing scenes of the Conference. Banks of ferns and pots of flowers were placed in various parts of the hall.

It was 9.45 before the President took the chair, as the members had been slow in arriving, but when Mr. Peck, the Senior Secretary, rang the bell, the hall was fairly well filled with ladies and gentlemen. The platform was arranged in the centre of the hall, and each member had a desk in front of him.

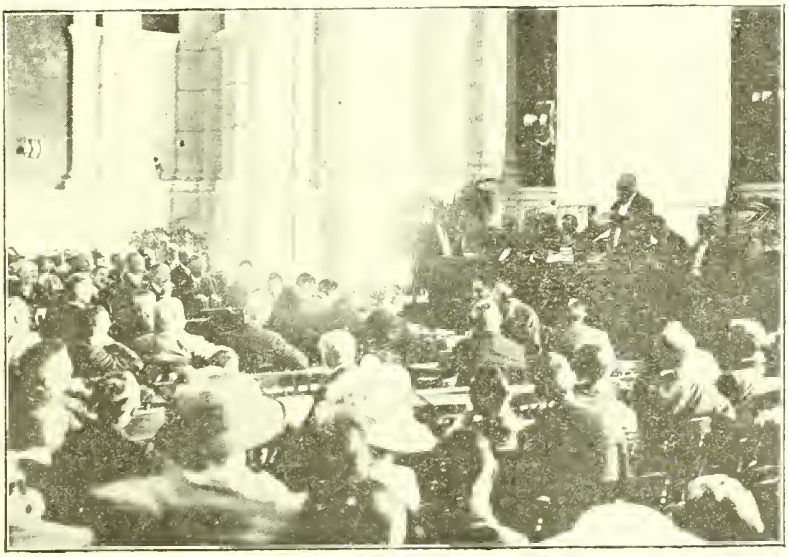
On the right of the President sat Mr. E. S. Peck, Mr. T. H. W. Idris, Mr. R. A. Robinson, and Mr. J. C. Umney (Treasurer). On the left sat Mr. H. Finnemore (Junior Secretary), Mr. W. A. H. Naylor, and Mr. S. R. Atkins. The last-named—the veteran of the Conference—who came in supported by Mr. Naylor, received a very cordial welcome, as it is some time since his health has permitted him to be present at a Conference. The President afterwards alluded to his presence in feeling terms.

The President, who, on rising, was received with loud cheers, began by calling on Mr. F. G. Foster, Chairman of the Higher Education Committee, to say a few words.

Official Welcome.

Mr. F. G. Foster said: Mr. President, Ladies and Gentlemen,—I have been asked to say just a brief word of welcome to-day, and I do so with peculiar pleasure as being one of the same calling as yourselves. As Chairman of the Higher Education Committee, I welcome you very heartily indeed to the Borough. (Applause.) I hope your deliberations will be for the good of the fraternity—(hear, hear)—and will produce greater unity among the members of the calling. (Applause.) These, I am quite sure you will agree with me, are two essentials to our calling at the present time, and if you can bring them about, your Conference will not have been held in vain here to-day. (Applause.) I do not intend to give you any lengthy speech—in fact, it would be impossible for me to do so. You will have a learned discourse from your President presently, and I know very well that at this Conference you meet not only for educational purposes, but partly for pleasure. Therefore, in the interests of the ladies I do not intend to detain you very long. But you will pardon me, perhaps, if I just say that I look with some concern to the future. What with the school clinics just established and the Insurance Bill, I am afraid the outlook is not very rosy for us. (Hear, hear.) Of course, on humanitarian grounds, we, as pharmacists, give place to no one in the desire that the children shall be attended to. ("Hear, hear," and applause.) But we say that if the State takes the matter in hand, the State should pay—(hear, hear)—and it is our duty to bind ourselves together to see that our interests are not lost sight of in dealing with matters relating to the common good. ("Hear, hear," and applause.) Now, it is astonishing how some gentlemen are apt to prate about sacrificing one's self for the good of the community; but you will invariably find that the gentleman who shouts that the loudest is the gentleman whose interests are not affected in the slightest degree. ("Hear, hear," applause and laughter.) Now, we think we have had an object-lesson in regard to the working-classes of this country—how they have bound themselves together, and although individually they may count as naught, collectively they have great weight. That is an object-lesson to us as pharmacists. (Hear, hear.) We can see what influence the medical men have had recently, and I think also that is an object-lesson to us as pharmacists. (Applause.) Although, perhaps, we may not always agree with the methods the trade unions adopt, still it behoves us, in order that we may not be unduly squeezed, to band ourselves together and make our voices heard as one body. ("Hear, hear," and applause.) I am afraid if I continue much longer, you will think I am drifting into a long speech, which I promised I would refrain from doing. (Cries of "Go on.") With reference to your visit here, I hope it will be particularly pleasurable. We claim ours to be an ancient Borough, but not only do we claim it to be an ancient Borough, but we claim it also to be somewhat up-to-date. As evidence of that I would point to that magnificent building opposite, and to this building in which we are met, erected at a cost of something like 250,000*l.* together. These must prove to you that if there is anything that we can possibly do to make your visit more pleasurable, to make your visit more interesting, if the members of the Local Committee will only mention their requirements, if it is in our power, we will do it. (Applause.) I should like some of you to go round this building, and see what is being done in the cause of education. Of course, at the present time these Conferences are no doubt called for educational purposes, but notwithstanding that, the fact is, as you told us last night, that you are out to enjoy yourselves. Still, I believe the Conference combines pleasure with business. If you go round this building I think, perhaps, it will make some of you carry your minds back to the time when you were thirsting for knowledge—not that you have ceased to thirst for knowledge; you are out for it now—but you will remember the time, a long time back, when the facilities for acquiring knowledge were not so great as those which are granted to the young people at the present day. We are continually reminded that circumstances have changed and are changing; that examinations, etc., are more difficult; but the young people who remind us, who are getting up in years, in regard to that, forget to remind us also that the facilities for acquiring knowledge are vastly greater than they were a few years ago. (Applause.) If in these days we do not progress, then all I have to say is that we are not doing justice to the efforts that are put forth on behalf of the rising generation. I hope you will carry away with you pleasant recollections of your visit here, and that you will thoroughly enjoy yourselves. (Applause.)

Mr. T. A. White, Chairman of the Local Committee: Mr. Chairman, Ladies and Gentlemen,—On behalf of the Portsmouth and District Pharmacists' Association, I beg to give you a very hearty welcome to this town. We have been looking forward for a long time to your visit here, and we trust that the arrangements we have made for your comfort will be all that you desire, and that when you leave us you will go away from the town thinking that the town still carries out its reputation, "Sunny Southsea." (Applause.)



In the Conference Hall.

Mr. S. R. Atkins, the Senior Vice-President, is addressing the meeting.

Thanks.

Mr. R. A. Robinson said: As one representing the visitors, I have the greatest possible pleasure in thanking Mr. Foster and Mr. White for their most cordial welcome. I can assure them and all our friends in Portsmouth that we intend to have a good time, as we have been invited to have. My friend Mr. Foster commented on the fact that this Conference tends to bind ourselves together. I hope he will notice that ladies are present, and that therefore that process may be a pleasurable one, as it has been before. (Laughter, and a voice, "I have no objection.") I believe, nay, I am convinced, that these Conferences do a great amount of good to visitors to the towns where they are held. In coming to the famous town of Portsmouth to discuss questions of great importance to pharmacists, we shall not forget the remarks of our friend Mr. Foster. We do hope, indeed we are sure, that it will be full of educational advantages and pleasure. We thank very much our friends in Portsmouth for the excellent arrangements they have made for our reception. (Applause.) We intend fully to work up to that ideal to which they have referred and have the best possible time we possibly can have. (Applause).

The President said: It is hardly necessary for me to say more on this subject, merely to add that we thank Mr. Foster most heartily for his very kind welcome. It is a great matter to us when we come to a town of this size to be welcomed by the educational authorities, and we have come here with a determination not only to do work, but to have a good deal of pleasure out of the meeting as well. (Applause.) I have very great pleasure now in asking you to give a very hearty reception to our good old warrior Mr. Atkins. (Loud applause.) Unfortunately Mr. Atkins has not been able to be with us as often lately as he would have liked and as we should have desired. (Hear, hear.) But I take it personally as a very great compliment that he has come down here to-day to support me in the important duties I have to perform. (Applause.) We are also honoured by having Mr. Fernie, from Durban, with us, and I take the opportunity now to welcome him as well as all the other delegates.

Apologies for Absence.

Mr. Finnemore then announced that apologies for absence had been received from the following: Dr. C. Symes, Mr. N. H. Martin, Mr. T. Tyrer, Mr. R. Wright, Mr. J. F. Tocher, Mr. C. B. Allen, Mr. J. P. Gilmour, Mr. F. H. Alcock, Mr. F. W. Branson, Mr. Hogg, Mr. T. M. Clague, Mr. C. E. Stewart, Mr. R. Bremridge, Mr. P. F. Rowsell, Mr. W. Laidlaw Ewing, Mr. Watson, Mr. J. Smith, Mr. C. Umney, Dr. Walsh, Mr. J. P. Kay, and Sir Edward Evans. The last-named wrote, "It is with extreme regret that I am not able to be present at the meetings of the Conference."

The President's Address.

It was now close on ten o'clock, and punctually according to the time-table the President arose and began his address. This was delivered in good voice and was listened to with very great attention, probably due in a great measure to the interesting nature of the subject it dealt with. The address, the delivery of which lasted exactly an hour, is printed on page 192 and following pages of this issue.

A Veteran's Recollections.

Mr. S. R. Atkins, the Senior Vice-President, whose rising was the signal for much cheering, then made a few remarks. These were delivered in the old sonorous voice and with the eloquence and force which are associated with the speaker. He said: It is the privilege—for age has its privileges as well as its penalties—it is the privilege of myself as the Senior Vice-President to propose a vote of thanks to the President for his valuable address. Now, will you tolerate for a moment garrulity in an old man? I want to say one or two words to you, for I have dropped out of your meetings for the last five years. Well, I tell you that this is the forty-eighth year of the Conference meeting, and that I have attended thirty-eight of them. (Applause.) It is only failing health that has caused me to fail in my attendance here at those meetings. I am not a founder—I wish I were. On one occasion I was almost a founder, for I nearly foundered on the Alps. (Laughter.) That year I was going from Leukerbad over the Gemmi to Kandersteg, and lost myself all night upon the mountains. So I was really a founder, but not of this Society. (Laughter.) I only wish I had been, but my attendance commenced a year after it was formed. It was, I think, at Bath in 1864. And oh! how many have been the privileges I have reaped and enjoyed from my association with this Conference! (Applause.) Some of my best friendships—friendships of the most enduring character—have been due to this Conference. When I think of the number of friendships that have been formed—of the attachments, ladies—attachments which have resulted in happy marriages—(hear, hear)—you will see that the social side has not lost its influence. Well, now, I appear very much like a Rip Van Winkle to-day, but I want to remind you that in that charming sketch of Washington Irving he makes the old Dutchman to have hibernated for forty years. Well, you see, my period of absence has only been five years, so that you will forgive me. (Applause.) But the one great reason which has brought me here to-day has not only been the nearness of my residence to this group of great towns—because there are five great townships here—but the fact that my dear friend Mr. Wells is in the chair. (Applause.) Now, I have not forgotten the fact that thirteen years ago—I think it is thirteen years; you will correct me if I am wrong—after our meetings at Belfast I went to Dublin, and there I was treated with real Irish hospitality. Now, I wonder where Mrs. Wells is! ("Hear, hear," and applause.) I must greet her. Ladies and gentlemen, if you want hospitality, well—you will get it in England, and you will get it in Scotland, but if you want the pure article—the real unadulterated—you have to go to Ireland for it. (Applause.) Why, I was taken down one day to Bray, the pretty little watering-place, and there we had a delightful day. Now, my friends, it is not the Vicar of Bray that I am going to refer to. Friendships formed in that way are abiding; they are permanent. So I felt I must make a great effort to come down to-day to Portsmouth and support my worthy friend. (Applause.) Well, now, ladies and gentlemen, if, in addition to all the descriptions you have had of this wonderfully interesting group of townships, you have had a most interesting address from the Mayor, may I just venture, being a little fond of books, to ask you, at your leisure, to look up Sir Walter Besant's autobiography? There you will find, in the first sixty pages of that delightful book, one of the most beautifully interesting accounts of Portsmouth, Portsea, and Porchester—written in his most graphic and interesting style. Sir Walter Besant was born in St. George's Square, Portsea, in the year 1836, and when he came to Salisbury a few years ago to unveil a mural tablet in the Cathedral there in memory of Richard Jefferies, the naturalist, he and I had some pleasant talk together about his great interest in and love for this, his native place. Well, now, ladies and gentlemen, I must not, I dare not—even with the temptation to which I have referred, the talkativeness of an old man—refer at all at length to the admirable address we have had to-day. Mr. Wells stated a difficulty which, I have no doubt, has presented itself to others. It did to myself in 1887 when I tried to think out a topic for my presidential address. I remember my friend behind me, Mr. Naylor, was my right-hand man. He said, "Why not try to make a *résumé* of the Victorian Era so far as it has connection with the condition of pharmacy?" Well, so far as Mr. Wells's address is concerned, I think it has been most practical and a most valuable one. (Applause.) I think his *résumé* of the Acts of Parliament, their construction, their influence, their failure in relation to pharmacy to secure those benefits for pharmacists for which they were intended, has been most valuable to us all. All I can say in regard to the address, with reference to analysing it further, is what I have said on previous occasions: "I must take this home, quietly sit down in my own study and read it over, so that I may speak about it or write about it, and do all that I can to carry out the principles it advocates." I believe it does good to make them known. (Applause.) I have the utmost—shall I say the supreme?—satisfaction in being here to-day to pay my personal tribute to one of my most valued friends. (Applause.) I wish to say that to me his address has been a valuable lesson. It has been an incentive to effort; and I hope, ladies and gentlemen, it may prove so to you all. I have the greatest pleasure in proposing that your very best thanks—if there are three degrees of them—be given to Mr. Wells for his address to-day. (Applause.)

Mr. Naylor: If I am unable to recognise any special fitness for having been invited this morning to second this vote, let me say at once that it affords me peculiar pleasure in performing this very simple duty. And in doing so I will endeavour to be exceedingly brief, for, in the first place, I feel that we are labouring under the spell which has been cast over us by that most delightful and felicitous speech from our dear old friend Mr. Atkins. (Applause.) In the second place, I feel that any words which could possibly be expressed could not in any degree enhance the value of the thankfulness that we feel towards our President for his most charming and admirable address this morning. ("Hear, hear," and applause). Now, some of us have experienced a difficulty in selecting a subject for the address, and in thinking it over I do not remember that the subject which has been dealt with so ably and so fully this morning has ever been more than touched upon by any previous President of this Conference. (Applause.) I need scarcely remind you that we have in Mr. Wells a man of wide experience, of vast knowledge, a man of considerable administrative ability, and a man who is thoroughly well equipped and fitted for the duty which he has discharged this morning. I have only now to ask you to show how well you think he has discharged this most trying and difficult duty. (Applause.)

Mr. **Atkins** then put the motion, which was carried with acclamation.

The **President**, in reply, said: Mr. Atkins, Mr. Naylor, Ladies and Gentlemen,—There are times when even an Irishman is knocked speechless. (Loud laughter.) On the present occasion I do feel very deeply indeed the very kind words that my good old friend Mr. Atkins has spoken in reference to my poor attempt at an address, and also for what Mr. Naylor has said. I take it as a very great compliment indeed that my dear old friend has come here to-day specially to support me in my official duties. He is one of the greatest ornaments the Conference has ever had (Loud applause.) He is a man whom it has always been a privilege for us to listen to, and the great loss to us has been that he has not been with us of late years. When he came to Ireland it was to me a great privilege to show him any little kindness I could. He came over to see what pharmacy was like in Ireland, and I believe he came away very well satisfied with what he saw. It is one of the great privileges of this Conference that we get into close friendly communion with members from all parts of the United Kingdom, and if members of the pharmaceutical profession realised this they would come here more than they do. It is a great thing to know men from all over the United Kingdom and even from our Colonies, and to meet them on these occasions. An address is perhaps not an easy thing to write, and it is not even easy to read it after it has been written. When it was written I found it to be rather long—I had written too much—and then I had to try to cut bits out here and there as I went on. This, I am afraid, did not improve the delivery. I thank you one and all for the very kind way in which you have received my address, and I thank my dear old friends for the way in which they have proposed this vote of thanks. (Applause.)

The ladies now withdrew for their visit to the Gunwharf, the time-table, so far, being strictly adhered to.

Delegates.

Mr. **Finnemore** then read the following list of delegates from local associations to the Conference:

Aberdeen Pharmaceutical Association.—Mr. J. P. Kay, Mr. W. F. Hay.

Association of Women Pharmacists.—Miss M. E. Buchanan.

Bradford Chemists' Association.—Mr. A. Hanson.

Cambridge Pharmaceutical Association.—Mr. E. H. Church, Mr. H. F. Cook, J.P., Mr. A. A. Deck, Mr. J. Evans, Mr. H. Flanders, Mr. T. J. Mallet, Mr. E. Saville Peck, M.A.

Chemists' Assistants' Association.—Mr. F. Naylor, Mr. G. A. Tocher.

Dover Chemists' Association.—Mr. J. Harcombe Cuff.

Exeter Pharmacists' Association.—Mr. H. Wippell Gadd, Mr. P. F. Rowsell.

London Chemists' Association.—Mr. J. Wellesley Douglas, Mr. J. C. Pentney, Mr. F. W. Truman.

Manchester Pharmaceutical Association.—Mr. J. Cleworth, Mr. J. Grier, M.Sc., Mr. W. G. Hughes, Mr. C. A Johnstone, Mr. H. Kemp, Mr. A. B. Stocks, Mr. J. Rymer Young, F.C.S.

Midland Pharmaceutical Association.—Mr. F. H. Alcock, F.I.C., F.C.S., Mr. C. Thompson.

Newcastle-on-Tyne Chemists' Association.—Mr. G. Foggan.

North Kent Pharmaceutical Association.—Mr. R. Feaver Clarke, J.P., Mr. A. Goldthorpe.

North Staffs Chemists' Association.—Mr. Edmund Jones, Mr. Weston Poole.

Nottingham and Notts Pharmaceutical Association.—Mr. T. Freeman, Mr. A. Middleton.

Oxford Chemists' Association.—Mr. J. A. R. Buchant, Alderman C. Clayton, Mr. J. Dolbear, Mr. J. Palmer.

Pharmaceutical Society of Great Britain.—Mr. R. Bremridge, Mr. W. G. Cross, J.P., Mr. J. Harcombe Cuff, Mr. W. L. Currie, Mr. J F. Harrington, Mr. F. A. Rogers, Mr. P. F. Rowsell, Mr. E. T. Neathercoat, Mr. C. Symes, Ph.D., F.C.S., Mr. Edmund White, B.Sc., F.I.C.

Pharmaceutical Society of Ireland.—Sir W. J. Baxter, J.P., Mr. G. D. Beggs, Mr. J. E. Connor, J.P., Mr. H. V. Goldon, Mr. T. N. Moffitt, Mr. J. Smith, Dr. J. A. Walsh, Mr. D. M. Watson.

Stockport Pharmaceutical Association.—Mr. W. P. Orrell.

Sunderland Pharmaceutical Association.—Mr. W. Nimmo, Mr. G. P. Fairman, Mr. J. Mitchenson, Mr. C. Ranken, F.C.S., F.R.M.S., Mr. A. D. Purse.

Thames Valley Pharmaceutical Association.—Mr. F. Harvey, Mr. A. Higgs, J.P.

Tunbridge Wells Association of Pharmacists.—Mr. A. E. Hobbs, Mr. Howard, Mr. J. J. Webb.

Western Pharmaceutical Association (London).—Mr. C. T. Allen, Mr. W. Browne, Mr. J. A. Jennings, Mr. H. R. Procter, Mr. R. L. Whigham.

Wolverhampton Chemists' Association.—Mr. W. R. Dunn, Mr. S. Phillips.

Report of Executive.

Mr. **Peck** then read the annual report of the Executive as follows:

The Executive Committee has pleasure in presenting their annual report for 1911. The committee has met on five occasions and transacted the necessary business of the year. As in our last report, so in this, we have to record the death of a great worker in pharmacy. On March 18 there passed away at Watford, in his seventy-sixth year, John Attfield, who not only was one of the founders of this Conference but through his initiative and energy contributed so largely to its long-continued success. It would be quite impossible in a short annual report to do more than briefly acknowledge his many activities for the advancement of pharmacy in general and of this Conference in particular. He was for seventeen years joint Secretary and Editor of the "Transactions." He filled the Presidential Chair at Southampton in 1882 and at Southport in 1883, and his addresses on those occasions are instinct with those high ideals for pharmacy which he carried into practice in his work as Professor of Chemistry in the Pharmaceutical Society's School, in his editorship of the British Pharmacopœia, and in his many other capacities. His death marks the passing of a great personality which has made a lasting impression on his numerous pharmaceutical students.

At the first meeting of the Executive in October 1910 the Research Sub-committee was appointed, and it has revised the research-list.

At the annual meeting at Cambridge last year it was unanimously agreed that subjects relating to the practice of pharmacy should be included in the programme of the annual meetings, and at a subsequent meeting of the Executive a sub-committee, consisting of Messrs. W. F. Wells (President), J. C. Umney (Treasurer), F. W. Gamble, E. F. Harrison, and the Hon. Secretaries, was appointed to carry this into effect.

This sub-committee has met on three occasions, and on its recommendation the following have been sanctioned by the Executive:

1. That the session devoted to the practice of pharmacy should be held on Tuesday in the Conference week, at 2.30 p.m.

2. That the chairman of the meeting should not necessarily be the President of the Conference, but should be chosen with special reference to the subjects under discussion.

Discussions upon the following subjects have been arranged for the meeting at Portsmouth:

1. Secret and Proprietary Medicines.
2. Pharmaceutical Education.
3. National Insurance Bill.

A list of questions on secret and proprietary medicines was sent to the local Pharmaceutical Associations, and a report based on the answers to these will be submitted at the meeting of this section.

A meeting of the Conference members of the Joint Standing Committee of the British Medical Association and the British Pharmaceutical Conference was held on Wednesday, May 31, to consider what line of action should be taken at the forthcoming meeting with the B.M.A. on June 15. It was decided that a circular should be distributed to the different Pharmaceutical Associations asking for their support upon the following points which the Conference members could lay before the Joint Standing Committee:

1. Having regard to the public safety, dispensing under the Government scheme should be done through the channels provided by the Pharmacy Acts, and that provision should be made in the Bill itself for the carrying out of the Chancellor's expressed intention that this work should be done by pharmacists.

2. The remuneration for dispensing and supply of drugs should be arranged with (*a*) the Insurance Commissioners, or (*b*) the local Health Committee, on a tariff system, and not on a capitation basis.

3. There should be a free choice to the insured person of pharmacists who are willing to go on the panel to supply medicine.

4. Pharmacists should be directly represented upon the Advisory Committee and the local Health Committee.

Replies were received from seventy-one Associations assuring the Conference of their support of the Joint Standing Committee. The meeting was held at the office of the British Medical Association, 429 Strand, London, W.C., on

Thursday, June 15, 1911, under the chairmanship of Dr. J. H. Taylor. There were also present: As representatives of the British Medical Association—Sir H. T. Butlin, Bart. (President of the Association), Mr. T. Jenner Verrall, Dr. C. H. Wise, and Dr. A. Cox (Deputy Medical Secretary); as representatives of the British Pharmaceutical Conference—Mr. W. F. Wells (President). Mr. C. T. Allen, Mr. T. Maltby Clague, Mr. G. C. Druce, Mr. H. Wippell Gadd, Mr. F. W. Gamble, Mr. A. MacMillan, Mr. J. F. Tocher, and Mr. E. Saville Peck and Mr. H. Finnemore (Hon. General Secretaries).

The Joint Committee had under consideration questions of mutual interest to medical practitioners and pharmacists arising in connection with the National Insurance Bill. The resolutions bearing thereon were unanimously passed, and it was agreed that such recommendations should be submitted to the respective parent bodies.

[The resolutions were printed in the last issue of The Chemist and Druggist, and Mr. Peck also read the resolutions as amended by the British Medical Association.]

Your Executive at its meeting on Wednesday, July 12, ratified the official resolutions passed by the Joint Standing Committee, and expressed regret that the Council of the British Medical Association did not do likewise.

Mr. J. Hearn, Assistant Secretary, resigned his post in October, and the Executive passed a resolution thanking him for his services during the past eleven years.

Reference was also made to the "Year-book," to the facilities given this year by the railways, and to the increase of membership.

Sir **William Baxter**, D.L., President of the Pharmaceutical Society of Ireland, in moving the adoption of the annual report, expressed the great pleasure he felt in finding himself in such happy surroundings in that town. He should really call it a city, for if the princely hospitality of its municipal chief, the position it enjoyed of being the premier naval port of Great Britain, and its increasing population were taken into account, it should be named the City of Portsmouth; and the popular Alderman Foster, its municipal chief, should be its worthy Lord Mayor. (Loud applause.) Another element in the pleasure he felt was the fact that the Committee in their wisdom had elected to the presidential chair the past President of the Irish Society—(applause)—a gentleman whose devotion to the interests of pharmacy had been commensurate with his whole professional career, and his attendance at the Conference had been continuous for over a quarter of a century. In moving the adoption of the report, he could not help feeling that the Society and pharmacy had lost one of its best members by the demise of Dr. Attfield. Since he passed his examination in chemistry under Dr. Attfield many years ago, chemistry had so enlarged itself that its scope was twice what it was at that time. The importance of the annual report could not be minimised by the references it contained to the Insurance Bill. Behind him on the platform were gentlemen who had been members of Parliament, who were able to speak on its economical and professional aspects; but he felt sure that at that juncture pharmacy was in a very critical state. It was important that the amendments mentioned by the Secretary should be embodied in the Bill. They ought, therefore, to urge them upon the attention of their representatives in Parliament so that pharmacy should have a proper chance to continue to exercise that influence for good which it had hitherto done in the country. (Applause.) He was glad to note that last year no fewer than sixty new members had been added to the list, not by pressure from headquarters, but from the cordial influence of those who attended the Conference. (Applause.)

The **President**, in calling upon Mr. Kemp (Manchester), expressed his delight that that gentleman was once more able to attend the Conference.

Mr. **Kemp**, in seconding the motion, said that he had pleasure in doing so, because in the last twelve months the Executive had decided to adopt a new move by allowing the introduction and discussion of subjects dealing with the practice as well as the science of pharmacy. (Applause.) His reason for being specially pleased was that when he had the honour of being a member of the Executive he moved a resolution at a meeting held, he thought, in April 1907, asking that the constitution of the Conference might be amended in such a way as would allow the introduction and discussion of practical subjects. Mr. Umney did him the honour of formally seconding the motion in order to secure it free and fair discussion. That, practically, was the only support he received on the occasion. (Laughter.) His old friend Mr. Tyler, from the chair, sympathised with him at the end of the debate by saying that while the members quite saw that there was a good deal to be said in favour of his proposal, they could not see their way to adopt it. The Chairman added that he hoped he would not be discouraged. He remembered remarking at the time that it was not the first time he had been in a minority of one and yet lived to see his proposals take practical effect. (Applause and laughter.) It was therefore with more than ordinary pleasure that he learned last year, during his invalidity, that the Conference had decided to adopt the departure, though not from any suggestion of his. He hoped it would prove a successful move on the part of the Conference, and that it would mean an accession to the membership. (Hear, hear.) He had reason to believe that it would. He should be the last to suggest for a moment that the scientific side of the Conference should be allowed to wane. He was sufficiently alive to the needs of the time to believe that by moving on lines such as they were now following they were bringing themselves more in uniformity with the other—sometimes called higher—professions of medicine and law which for years had, at their annual meetings and conferences, allowed the discussion of matters referring to the practical as well as to the scientific or more legal side of their profession. They had therefore a good lead in that respect. It went without saying that among the members who attended the Conferences there naturally must be a large number who, while taking a keen and an intelligent interest in the papers read, felt that there were subjects for the discussion of which no opportunity was afforded the craft as a whole. For this reason he was glad the Conference had adopted the new line. He hoped the discussions on the practical side of pharmacy would prove as successful as those on the scientific side had hitherto been. He regarded the outcome of the joint meeting arranged between the Conference and the British Medical Association as an earnest of what they could do on the lines he had indicated. So far as he recollected, it was the first time on which the Conference had taken any official recognition of subjects similar to the one then considered, and he believed the possibilities of action in a similar way were practically unlimited. He had the privilege of being one of a deputation last week to the House of Commons to meet certain members of Parliament to discuss the National Insurance Bill. He was bound to say that whatever the general result might be in regard to the outcome of that measure there could be no question that the members whom they had the pleasure of interviewing gave them credit for having educated them on the occasion. (Applause.) The deputation made certain things clear which were previously obscure to those members. (Hear, hear.) The members gave the deputation a promise of a very sympathetic consideration of Clause 14 when it comes before the House. (Applause.) Mr. Kemp concluded by thanking the President for the welcome extended to him after his enforced absence.

The **President**, in putting the resolution, directed attention to the fact that the Executive had a big stock of "Year-books," which it would be a pity to destroy. They had therefore arranged, he said, that any member who had not got back numbers of the Conference reports should have them on application to the Secretary by paying carriage. Referring to the reduced railway-fares secured by the Executive, he said that a large number of members had not availed themselves of the privilege extended to them. Unless they did so it was hardly likely the railway companies would continue to give them the reduction. Touching on Mr. Kemp's observations on what he designated the Conference's "new child," the President remarked that that gentleman need not despair. It was just possible that the seed which Mr. Kemp threw about on the occasion to which he referred had now borne fruit. So that one need not ever despair of being in a minority even of one. (Laughter.)

The annual report was then unanimously agreed to.

Financial Statement.

Reference was made to this statement in the *C. & D.*, February 11 (index folio 227), as it is now issued earlier in the year. The following is an abstract of the Treasurer's statement :

The items on the Dr. side are: 141*l.* 5*s.* 10*d.* from last balance-sheet; members' subscriptions, 503*l.* 15*s.* 1*d.*; sales of Index and "Year-book," 25*l.* 18*s.* 6*d.*; advertisements in "Year-book," 126*l.* 4*s.* 2*d.*; liabilities (printing and editing), 77*l.* 1*s.* The deficit on December 31, 1910, is 25*l.* 6*s.* 3*d.* The Cr. side of the balance-sheet includes expenses of the publication of the "Year-book" for 1909 and 1910, 362*l.* 5*s.* 7*d.*; Editor's salary, 150*l.*; Assistant Secretary, 20*l.*; office rent, etc., 84*l.* 7*s.* 6*d.*; postages, etc., 36*l.* 6*s.* 1*d.*; printing and stationery, 22*l.* 16*s.*; journals and bank charges, 4*l.* 7*s.* 7*d.* The liabilities as last balance-sheet since paid amount to 135*l.* 11*s.* 7*d.*; the bank balance, cash in hand, and amount due from publisher, 51*l.* 14*s.* 9*d.* The Bell and Hills Fund showed a balance of 14*l.* 14*s.* 2*d.*, and the Research Fund stands at 25*l.* 2*s.*

Mr. **John C. Umney**, the Treasurer, in submitting the statement, said they would remember that it was decided to rearrange the funds of the Conference, and make the year run from January 1 to the last day of December. In consequence of this the balance-sheet distributed at the end of last year or the beginning of this, when the request was made for payment of subscriptions, covered a period of eighteen months. There was then only a deficit of 25*l.* after paying for the "Year-book" of 1910. Since then their position had been most gratifying. Subscriptions had come in so well that they had now a balance in the bank of well over 200*l.*, sufficient to pay for the "Year-book." (Applause.) They could now plainly see that the funds of the Conference were satisfactory, and that it was now self-supporting. With the accession of members which he believed would come from the development of the Practical Section, the Conference would be very much on the right side. (Applause.)

Mr. W. A. **Bell** moved the adoption of the report.

Miss **Buchanan** seconded, and the proposal was agreed to unanimously.

THE PAPERS.

The **President** then called upon the author to read the following paper :

Further Note on Podophyllum Emodi.

By John C. Umney, F.C.S.

The author recalled the controversy regarding the relative medicinal values of the resins of the two species of podophyllum—the American, *Podophyllum peltatum*, and the Indian, *Podophyllum Emodi*—which he thought it desirable to have settled before the publication of a new edition of the British Pharmacopœia. The Indian rhizome has been recognised in the Indian Addendum, and it has been officially suggested that it should be included in a new British Pharmacopœia, the suggestion being based principally upon the chemical researches of Dunstan and Henry ("Journal Chem. Soc.," 1898, 73, p. 209), to which subsequent reference will be made, and the physiological experiments of MacKenzie and Dixon ("Edin. Med. Journal," November 1898). Reference was also made to the investigations of the Indigenous Drugs Committee of India (1909), which showed that the drug is rather more purgative than American podophyllum.

In The Chemist and Druggist (August 28, 1909, page 385) the author summarised the investigations of the drug which had been made in this country and elsewhere, and the deductions from those examinations, emphasising the point that the doses employed were much larger than those used in this country, at any rate of the American resin. He there urged that samples of the Indian drug obtained from different districts and altitudes, collected at different periods of the year and dried under constant conditions, should be placed at the disposal of investigators, because the results obtained indicated great difference in the proportion of resin, its constitution and activity, according to the time of the year that the drug had been collected. Shortly afterwards the author received a communication from the Indigenous Drugs Committee, Calcutta, asking whether he was prepared to have a series of experiments conducted upon the drug, collected under different conditions and at different seasons, in accordance with his suggestion, and as a result he duly received from Mr. J. H. Burkill a supply of the rhizome gathered after fruiting.

Dunstan and Henry showed that the rhizomes of wild plants of the *P. Emodi* varied in their content of resin and podophyllotoxin, which variation (if confirmed) might naturally be overcome by the cultivation of the plant and collection at a definite, correctly determined period. The preference for the fall-dug root of *P. peltatum* in America is well known, and is not based entirely on the actual resin percentage. The present investigation is more than ever convincing that it is upon natural variations in the resin, most probably at different seasons of the year, that the varying results have been obtained. The changes in the composition of plant constituents according to season are well known, and are well exemplified in two pharmacopœial instances, aconite-root and cherry-laurel leaves.

All workers are agreed that the proportion of resin in the Indian variety is on an average twice that of the American, the following percentages being stated : Dymock and Hooper, 12; J. C. Umney, 11.4; Dunstan and Henry, 9 to 12.

It is not easy to review the results obtained by different workers because of differences in processes and nomenclature of constituents. It would appear certain, however, that picropodophyllin is not an actual constituent of the drug, but is formed by decomposition of podophyllotoxin, which, together with podophyllo-resin—an indefinite amorphous substance—represents the activity of the drug.

Chemical Examination.

The examination of the roots now placed at the author's disposal was conducted by Mr. C. T. Bennett, B.Sc., on lines exactly following the researches of Dunstan and Henry. The rhizome lost 9.5 per cent. on drying, and from it a resin was prepared by the B.P. process which contained 2.8 per cent. of moisture, which is some 2 or 3 per cent. less than that usually found in the podophyllin B.P. of commerce. This resin was used for the physiological tests referred to later. A further quantity of the rhizome was extracted with absolute alcohol, the alcohol recovered, and the residue washed with water and dried at 100° C. The yield of resin by this process was found to be 10.79 per cent. A good deal of fatty and gelatinous matter was removed in the washing.

Another portion of the root was mixed with lime, exhausted with chloroform, and the chloroform evaporated. The residue was dissolved in absolute alcohol mixed with lime and evaporated to dryness. More alcohol was added and again evaporated to dryness. The residue was then extracted with hot alcohol, and the filtered solution evaporated to dryness. By this means 5.43 per cent. of picropodophyllin was obtained, corresponding to an equal weight of podophyllotoxin, with which it is isomeric. This proportion is so much higher than the author obtained in 1892 that a comparison was made, following the same process, of a sample of American resin and that prepared and reported on in 1892. The following figures were obtained, indicating that the present sample might be expected to be twice as strong as the old sample or the American resin :

Indian, 1892	25.0 per cent.
Indian, after fruiting, 1910 ...	50.3 per cent.
American (*P. peltatum*) ...	22.9 per cent.

Physiological Tests.

Though it may not appear wise at present to judge of the therapeutic value of the resin by chemical analysis alone, it must be said that the physiological tests so far recorded show divergence, and seem to support the chemistry of the resin. The author found in 1892 that the action of the resin in doses of ½ to 2 grains to seventeen persons over a period of a fortnight was not so marked as that of *P. peltatum*. Drs. MacKenzie and Dixon found it greater, and therefore here one might expect a difference in the composition of the resin. Now, finding that the resin percentage is similar but the podophyllotoxin much higher, as much as 5.43 per cent., greater activity may naturally be expected.

Dr. W. E. Dixon, who with Dr. MacKenzie undertook the investigation of the relative activity of the Indian and American resins as prepared in the Imperial Institute Laboratories, was asked to examine the resin prepared upon the present occasion, and he reported that $\frac{1}{8}$ grain acted efficiently on himself and nine other persons, though varying somewhat according to natural susceptibility to such drugs.

Podophyllin Standard.

The author concludes that a reasonable method of judging podophyllin resin is by means of podophyllotoxin assay :

Podophyllin resin should yield not less than 25 per cent. of podophyllotoxin assayed by the following process:

Five grams of the resin is mixed with 5 grams of slaked lime, and the mixture exhausted with chloroform in a Soxhlet extraction apparatus. The residue left on evaporating the chloroform is dissolved in absolute alcohol, the solution made into a thin paste with slaked lime, and the whole evaporated to complete dryness. (This should be done with constant stirring to prevent spurting.) More alcohol is added and the evaporation repeated. The dried residue is then extracted with boiling absolute alcohol, and the filtrate evaporated to dryness in a tared dish. The filter-paper and contents should be extracted with absolute alcohol in a Soxhlet tube, and the filtrate added to the former filtrate. The residue consists of picropodophyllin, the weight of which represents an equal weight of podophyllotoxin.

By the adoption of this method either variety might be made official in the new British Pharmacopœia, and a resin of fair activity be obtained. The author hopes to continue the investigation with other samples of the rhizome from different districts and collected at varying seasons.

Discussion.

Mr. Naylor asked whether it is proposed to include *Podophyllum Emodi* in the next Pharmacopœia, and whether author knew of any means of ensuring that chemists can get the root of the particular time of gathering which the author indicated as advisable from the point of view of activity.

Mr. Ransom thought it desirable to include in the B.P. as many drugs as possible that can be produced within the Empire. It is often difficult to obtain supplies of American podophyllum. He hoped that *Podophyllum Emodi* would be introduced into the B.P., as it was in the Indian Addendum.

Mr. Cross asked whether the resin-content varied according to the altitude at which the plant is grown.

Mr. Pentney asked whether the drug is cheaper than *Podophyllum peltatum*.

Mr. Umney, in reply, said that in regard to Mr. Pentney's inquiry, the first shipment that arrived in this country was about half a ton in 1892, since which time no large quantity has arrived. Mr. Ransom answers Mr. Naylor's inquiry. It was Dr. Attfield who suggested that the matter needed further investigation. In regard to Mr. Cross's suggestion as to the altitude at which the podophyllum is grown, he understand that this is being watched by the Indigenous Drugs Committee, as also the question of the nature of the soil.

A vote of thanks having been given, the next paper taken was

The Supposed Loss of Morphine in the Preparation of Tincture of Opium.

By E. H. Farr, F.C.S., and R. Wright, F.C.S., Pharmaceutical Chemists.

From time to time statements have been made to the effect that in the conversion of opium into extract or tincture a loss of alkaloid results, or, rather, that the quantity of morphine shown by the official assay of a sample of opium is always greater than the amount found in the finished product, even when the utmost care has been taken to secure perfect exhaustion of the drug. In the latter case the official process for the preparation of the tincture cannot have been followed, but this does not affect the question at issue. The experiments detailed in the paper were carried out with a view of testing the accuracy of these statements, and in case of their correctness to find out whether the loss of alkaloid is fixed or variable. For the purpose of the experiments seven samples of opium were obtained from leading drug-houses. They varied in weight from $3\frac{1}{2}$ to $9\frac{1}{2}$ oz., and some were perceptibly harder than others. All were submitted to the following general method of treatment :

In cases where much extraneous matter was present—*e.g.*, rumex leaves and fruits—this was removed by scraping or shaving. The remainder was cut up and well beaten in an iron mortar until the mass was plastic and perfectly homogeneous, and in this condition was used for the preparation of the tincture. A portion was weighed and dried over a water-bath until it was brought into a condition suitable for reducing to powder. It was allowed to cool, the weight again taken, and then reduced to a uniform powder in a mortar and passed through a No. 20 sieve. The product was finally triturated in a mortar until thoroughly mixed, and was then transferred to an air-tight container.

The powdered opium was assayed by the official process, and both in this and in the assay of the tinctures the official details were as far as possible adhered to, so as to make the whole series of determinations strictly comparative. A little difficulty was occasioned by the fact that whereas the official assay of opium is made on the powder, the tincture is prepared from moist opium. This was got over by calculating the figure for powdered opium into terms of the moist, on the basis of the recorded loss of moisture in drying. In this way the excess or deficiency can be clearly shown. The methods employed for the exhaustion of the tincture-marcs varied somewhat, and for this reason the *modus operandi* followed in each case was fully described. The authors gave the following

Summary of Results.

(A) *Calculated on Basis of Official Assay Processes.*

Sample No.	Per cent. Morphine in Moist Opium	Per cent. Morphine in Tinctures and Marcs	Deficiency	Percentage Deficiency
1	11.48	10.51	0.97	8.45
2	13.27	12.84	0.43	3.24
3	11.54	11.09	0.45	3.9
4	13.74	12.99	0.75	5.4
5	10.75	10.46	0.29	2.7
6	10.0	9.92	0.08	0.8
7	11.55	10 51	1,04	9 0

(B) *Calculated on Basis of Alterations proposed by Farr and Wright.*

Sample No.	Per cent. Morphine in Moist Opium	Per cent. Morphine from Tinctures and Marcs	Total Gain or Loss	Percentage Gain or Loss
1	11.25	10 64	−0 62	−5.5
2	13.03	13.0	−0.03	−0.23
3	11.32	11.23	−0.09	−0.7
4	13.47	13.15	−0.33	−2.4
5	10.54	10.59	+0.05	+0.47
6	9.81	10.04	+0.23	+2.3
7	11.32	10.64	−0.68	−6.0

The results of the experiments, as shown in Summary A, go to prove that when the official methods are followed throughout there is always a loss of morphine. In the seven samples of opium worked upon this varied between the limits of 0.8 per cent. and 9.0 per cent. of the whole, with an average for the whole series of 4.78 per cent. That there is a loss has been admitted for some time past by several workers.

In Summary B the effect is shown of the changes proposed by the authors upon the results of the present series of experiments. The effect of those changes would be to reduce the loss to a maximum of 6 per cent. and an average for the whole series of 2.4 per cent. of the total, while in two cases the morphine found in the tinctures was in excess of the quantity estimated to be present in the opium used.

In the light of these results it is evident that there is still room for a thorough review of the whole subject. If the principles of the process had been radically unsound one would have expected to find the deficiency of morphine to be more constant and regular than is the case. The loss appears to be more probably due to occlusion of the alkaloid, rendering its complete extraction by water or alcohol a matter of practical impossibility, or to some other factor or factors which have hitherto escaped recognition.

Discussion.

Mr. **Dott** referred to the value of the paper as a contribution to a difficult subject. Those who work in the extraction of alkaloids from opium meet with many difficulties on account of the varying composition of the opium. When the distinct error in the B.P. assay process for opium and the tincture is put right the loss would not be found to be so great. The oxidation of the morphine might perhaps account for the loss which the authors indicate, and this would vary according to the kind of opium.

Mr. **Cripps** said the subject had considerable interest to him, as his experience is that there is no appreciable loss of morphine in making tincture. He had recently made experiments to see if there is any residue of morphine in the marc after preparing the tincture. Allowing for the tincture left in the marc, which he calculated as equivalent to 37½ mg. of morphine, he found just over 36 mg. There could not in that case, he said, be any loss. His view was rather that the difference found by the authors is due to the erratic behaviour of the assay processes. With some parcels of opium he had been able to get correct results by the B.P. process, but with other samples of opium the results were 1 per cent. out. This 1 per cent. is the extreme error of the B.P., and it is on the side of too high. It is not due to the volume of the filtered extract taken; whether 102 or 104 c.c. is taken would only account for a small percentage of difference. There is something radically wrong with the process. Lime in the precipitated morphine would show a large error, but not so large as has sometimes been suggested; it may be 0.3 to 0.4 per cent.

Mr. **Umney** said that on this subject the Committee of Reference in Pharmacy were much divided. Mr. Hills and himself came to the conclusion that on a manufacturing scale covering several tons of opium there is a loss of about 4 per cent. The authors of the paper took the opposite view, and with the object of clearing up the doubt the investigation was made.

Mr. **Naylor** suggested that as the authors are going to investigate further the cause of the loss, they should start with an opium of known composition, or they will not be able to satisfy themselves as to whether there is a loss or not. The conditions upon which the work is done must be defined. Opiums of different composition may yield different results, according to the form in which the alkaloid is combined.

Mr. **Harrison** asked whether the authors had really totalled up the morphine, because in making tincture the whole of the morphine is not extracted. With water and alcohol the whole of the alkaloid is not extracted, whereas with lime the whole is obtained. He pointed out that in the results which the authors showed some came out satisfactorily, while others appeared to show a loss. This would be accounted for by differences in the assay processes. The occlusion theory would only be proved by assaying the residue with lime and finding morphine present. Mr. Umney's experiments on a large scale were valuable, but might be easily explained by the state of purity of the morphine. It is likely that on the crude opium there would be more lime in the morphine than in the morphine obtained from the tincture. Litmus as an indicator is not satisfactory in the assay process; the titration should be checked by weighing. Cochineal is a better indicator. Another factor which might cause a great difference is the amount of moisture in the opium at the time of assaying, but the authors seem to have carried out the process on the dry powder, and therefore the results should be a little too high, and not too low. He had been asked recently by a firm who powdered opium on a large scale to account for the apparent loss of opium. He was able to show that the loss was apparent and not real, and was due to weighing at varying stages of moisture condition. In the case of the authors he thought the loss can be accounted for by differences in the assay process; he would also like them to get out the morphine left after full extraction, and so justify their loss.

Mr. **Cripps** said he had found iodocyanine the best indicator.

Mr. **Dott** agreed as to the untrustworthiness of the B.P. assay process. The retired head of the United States Government Laboratory has stated that the process is quite unreliable for determining the morphine in opium.

Mr. **Farr**, replying, said it is a complicated subject, and probably they would not expect him to agree with the cogency of certain remarks. Mr. Harrison states that the actual loss may be found in the marc, and as a matter of fact they had been able to find morphine in the marc after percolation until colourless by the lime process. They hoped to follow up the investigation, which owing to various circumstances can only be continued during the winter months.

The **President** remarked that the paper was important and serious to chemists, and he hoped that further investigations would enable the authors to come a little nearer the facts of the case.

The next paper was

Extract of Indian Hemp.

By Harold Deane, B.Sc. (Lond.), F.I.C

It was pointed out by Dr. Hooper ("Year Book," 1894, 484) that the official extract of Indian hemp is composed of a mixture of a green resin and brown water-soluble extractive matter, and Merson ("P.J." (iv.), 14, 1904, 234) showed that this brown extract was not readily soluble in alcohol, and that commercial extracts varied largely in the proportion of this substance they contain.

A large number of samples of extract have been examined, and the predominance of non-official extracts which were found is due, the author states, to the pharmacopœial preparation being unsatisfactory. It is composed of two constituents, the resin and the brown extractive, which show a tendency to separate, and, moreover, it is by no means completely soluble in alcohol, which makes the preparation of the tincture troublesome and messy. Therefore a demand has arisen for an extract soluble in alcohol, and there is a very general idea that the B.P. extract ought to be soluble in alcohol. Dr. Martin's paper to the 1909 meeting was cited in this connection.

There is little doubt now that the resinous portion of the extract contains the active principle, and therefore extracts which are practically pure resin may be expected to be therapeutically more active as well as pharmaceutically more elegant. To obtain such an extract Merson suggested the use of absolute alcohol or ether, but these solvents are much more expensive than the industrial alcohol which is now employed. A simple and inexpensive method which yields a product that is all that can be desired, and which is well known to manufacturers, consists in washing away the brown extractive with warm water, after the spirit has been distilled off, in the same way as resin of jalap and resin of scammony are prepared. The author urged that this method should be adopted in the Pharmacopœia, so that the present unsatisfactory state of things may be altered. In addition to making this change in method, it was suggested that some limits as regards insoluble matter and water should be included. A large amount of water can be incorporated in the extract, and such quantities are obviously undesirable. The limit should not be placed too low, as volatile oil is also included in the loss on drying, which is called "water," and a definite time of heating should be given, as the last portions of volatile matter dissipate very slowly. The solubility in ether (sp. gr. 0.720) is a better test of the quality of an extract than its alcohol solubility. Alcohol redissolves a considerable portion of the brown extractive, and it is necessary to use a definite amount (about 20 c.c. for each gram of extract) to get uniform results. In the case of a washed extract the portion insoluble in alcohol is a dark green fatty body. On treating this with ether, a dark green oil, probably derived from the seeds, is obtained, leaving a greenish-grey powder behind. This consists of a little water-soluble brown matter, which has been left behind in washing, and the remainder dissolves in caustic-soda solution, and is not reprecipitated by acids. It is no doubt the result of the action of heat on the brown extract. On microscopic examination no trace was found of cellular débris derived from the drug which Greenish and Griffiths found present in a sample of extract they examined.

The author exhibited a series of three tables of analytical results. The first dealt with yields of (1) alcoholic extract and (2) resin and percentage of resin in seventeen specimens of cannabis indica. Thirteen of these gave from 17 to 26.5 per cent. of alcoholic extract containing from 45 to 69 per cent. of resin, but four only of the extracts showed less than 60 per cent. of resin, the average being 56. Four specimens of Madagascar cannabis indica yielded alcoholic extract 18 [80], 11.2 [93], 13.1 [96] and 18.9 [76] per cent., the figures in brackets being the percentage of resin in the extracts. The second table was devoted to the solubilities of seven commercial extracts; one was almost entirely soluble in alcohol and ether, the alcohol-solubility of others being: *a* 86.9, *b* 98.3, *c* 98.6, *d* 72.3 [25.1], *e* 95.3 [4.4], and *f* 83.9 [11.4] per cent. In this case the figures in brackets represent water-content, all being exceptionally high. The ether insoluble matter of *c* was 5.6, *d* 1.65, *e* 2.25, and *f* 42 per cent.; *b* was a Madagascar cannabis extract. Similar figures were given in the third table for ten more extracts.

The present state of affairs regarding this extract is bad for the medical man and the patient, owing to the variation in strength, and inconvenient for the wholesale druggist, whose customers order "Ext. cannab. ind. P.B." and frequently expect something quite different and more expensive.

Discussion.

Mr. Mabbs remarked that Mr. Deane attributes the activity of cannabis indica to the resin; but those who were at Dundee will recall Professor Marshall's experiments, which proved that the activity is due to cannabinol, and not to the resin. Cannabinol is found to retain its activity in sealed tubes, but deteriorates as soon as it is exposed to the atmosphere. Professor Marshall has recently repeated that statement, so that one may well ask, Is it any advantage to know the amount of the resin? The author shows that Madagascar cannabis actually contains more resin than the Indian. Experiments have proved that cannabis grown in the United States is equally active with that grown in India, so that there is no reason for confining the cannabis to Indian grown.

Mr. Umney said the chief use for ext. cannabis is in corn-solvents, where a fine green colour is at least an important factor. Now that the price of cannabis has been enhanced by the export tax, it becomes a question of whether this is not a costly use for the extract. It should be possible to get a physiologist with really bad corns to make an investigation as to whether a corn-solvent with cannabis indica dees give relief as compared with one in which some equally vivid colour is employed.

Mr. Gadd was surprised that Mr. Deane made such slight reference to physiological testing. In the case of cannabis indica chemistry does not afford a sufficient test for the drug. He certainly did not feel justified in sending out an extract unless he had satisfied himself that it possesses some efficacy.

Mr. White said the impression he had is that the secret of a good cannabis indica is that it should be made from the fresh product and imported in sealed tubes. It must be valueless as used at present.

Mr. Dott said the question arose as to whether the extract had sufficient medical activity to warrant its retention in the Pharmacopœia.

Mr. Finnemore, after referring to the great value of papers that tend to show the efficacy of a medicinal product, said it opens up a nice ethical point as to whether the manufacturers should follow the B.P. that is official at the time, and whether the B.P. is of much good when it restricts manufacturers to its processes which may be proved to be defective or out of date. It seems to show that activity-tests are of gross value. Extract of cannabis indica is very little used in hospital practice, and the teaching of therapeutists seems to be that owing to the great variability of the product it is dangerous to employ it.

Mr. Brewis pointed out that extracts containing quite a moderate amount of watery extract are liable to separate. The assay would be different if conducted from the top or bottom portions.

Mr. Deane, replying, said the active principle is in the resinous portion, which contains the cannabinol. The physiological test is not a quantitative one, but affords a check.

The President said it seemed a question as to whether manufacturers should be a law to themselves, or stick to the text books.

The next paper was

Note on Spirit of Sal Volatile.

By E. W. Pollard, B.Sc.

For the preparation of spirit of sal volatile the Pharmacopœia directs that a mixture of alcohol, water, and essential oils be distilled. During this distillation the majority of the oil comes over early in the process. To ascertain the proportion of oils of lemon and nutmeg that fractionally distilled in steam the author placed the B.P. quantities—14.1 c.c. oil of nutmeg and 20.3 c.c. oil of lemon—with a litre of water and collected the distillate in five fractions. No less than 75.5 per cent. of the oil distilled over in the first 100 c.c. The other four fractions gave (2) 17.5 per cent.; (3) 2.9 per cent.; (4) 1.4 per cent.; (5) 0.8 per cent. The remaining 1.7 per cent. represents the residue of brownish fixed oil which always remains in the still whether distilled with alcohol or water. The aroma is most delicate in the first fractions, the later ones becoming even objectionable, and on this account the author has made it a practice to ignore the extra 225 c.c. directed to be collected. The proportions of oil vary with different forms of still, but the author thinks the results confirm his opinion that the distillation of the alcohol is merely a waste of time and gas, and is attended by other difficulties. When only oil and water are distilled the operation is safe, and small apparatus such as is used for analysis is quite sufficient for a gallon of spirit of sal volatile. The author recommends the following process:

Oil of nutmeg	4½ drachms
Oil of lemon	6½ drachms
Water	2 pints

Distil 1 pint, mix with 6 pints of alcohol.

Dissolve

Ammonium carbonate	4 oz.

in

Strong solution of ammonia ...	8 oz.
Water	9 oz.

by the aid of gentle heat. Add this solution to the alcoholic solution of oils.

Discussion.

Mr. Umney said that as Mr. Pollard seemed to call upon a manufacturer to reply, he would state that the necessity for distillation arises from the fact that the traces of aldehyde in the spirit must be fixed in the still by alkali to prevent discoloration afterwards. The essential oil of nutmeg always contains a certain amount of fixed oil, and it is proposed in the next Pharmacopœia to limit the proportion. Mr. Pollard's method is not an entirely practical one.

Mr. J. R. Hill asked if it is worth while to employ distillation in making this preparation. Alcohol can be obtained free from aldehyde, and if this with good essential oils is employed that seems all that is necessary. For all practical purposes a mere solution of the oils is all that is wanted. In hospital it is a common practice to employ such a solution, and if it were official it would lead to pharmacists making their own preparation surely a most desirable thing.

Mr. Cripps did not agree that distillation is desirable, and beside it is a bar against pharmacists making the preparation. As a fact, the author seems to have lost sight of the discoloration effect. The B.P. adds the ammonia after distilling. The colour is sometimes due to matter dissolved from the wood of the casks. The best way to prevent discoloration is to distil the spirit with a small amount of ammonia and add the bulk afterwards—ʒj. to ʒij. per gal. is sufficient to prevent the subsequent discoloration of the sal volatile. The distillation of the oils may be either with alcohol or water.

Mr. Pollard, in reply, said he had not met with the discoloration referred to, perhaps because he obtained his spirit from a trustworthy source. If tap-water is used, he believed the chalk it contains would be sufficient to fix the colouring matter.

After the author had been thanked for his paper, the next was taken.

A Suggested Standard for Thyroideum Siccum.

By Reginald R. Bennett, B.Sc. (Lond.), F.I.C.

At the present time there is no officially recognised standardisation process for thyroid preparations.

The agreement among the majority of pharmacologists that the activity of thyroid is directly proportional and dependent upon the combined iodine present appears to render it desirable that an iodine standard should be fixed, especially in view of the wide variations in the iodine content of commercial samples of thyroideum siccum. Specimens of thyroideum siccum examined recently showed combined iodine present varying from 0.315 per cent. to 0.038 per cent. Another thyroid preparation, supplied only in tablet form, is stated by the manufacturers to be standardised to contain 0.2 per cent. of combined iodine, and this figure has been confirmed. The author finds that the percentage of iodine in dry thyroid prepared from a series of sheep's thyroids obtained direct from the slaughter-house varies from 0.096 to 0.21 per cent. After comparing these with the results obtained by other workers, he considered that an iodine standard of 0.15 per cent. might be adopted for thyroideum siccum without in any way unduly harassing the manufacturer.

The author used the following method of determining the iodine, which is substantially that of Baumann :

Mix 5 grams of the dry thyroid with 8 grams of powdered sodium hydroxide and fuse in an iron crucible until carbonised, when another 2 grams of powdered sodium hydroxide is added, and then 2 grams of potassium nitrate in order to oxidise completely the carbon. The fusion is conducted throughout at a dull-red heat, and during the addition of the potassium nitrate the fused mass is stirred with a steel spatula in order to facilitate the oxidation. The fused mass, when cool, is extracted with water, and filtered into a stoppered flask, the greater part of the alkali is neutralised with sulphuric acid, then 15 c.c. of carbon disulphide is added, and the liquid finally made acid with sulphuric acid. A portion of the potassium nitrate is reduced to nitrite during the fusion, the nitrous acid formed decomposing the iodide present with the liberation of iodine, but 2 grams of sodium nitrite should be added in addition to ensure excess of nitrous acid. The contents of the flask are well shaken in order to dissolve the liberated iodine in the carbon disulphide, and the liquid then poured upon a moistened filter. The filtrate is shaken with another 10 c.c. of carbon disulphide, in order to remove the last traces of iodine, and again filtered. The two quantities of disulphide are washed free from acid, a hole is made in the filter-papers, and the carbon disulphide containing the iodine in solution allowed to run into a small stoppered bottle, a small quantity of sodium bicarbonate added, and then titrated with centinormal sodium thiosulphate solution, shaking vigorously after each addition of thiosulphate until the violet colour of the iodine is completely discharged.

Discussion.

Mr. **Finnemore** said that an advance copy of the paper had been sent to Mr. Stewart, of Newcastle, who had sent a letter agreeing with the author that Dr. Reid Hunt's iodine-value test is good. There is not, however, sufficient data to enable this standard to be fixed. That suggested by Mr. Bennett seems too low, Mr. Stewart having found an average of 0.3 per cent. of iodine. He suggests a minimum of 0.25 per cent. of iodine, but more figures covering the entire year and from different workers are needed. The estimation process employed is liable to give results too low.

Mr. **Gamble** thought that the variation shown was a strong argument for standardising the preparation in the next Pharmacopœia. It is agreed that the activity is due to the iodo-albuminous substances that the thyroid contains. If a standard is decided upon, he suggested that it should bear a relation to the fresh glands rather than to the dried product.

Mr. **Harrison** did not agree as to the desirability of fixing a standard of this sort in the next B.P. What is the kind of combination in which the iodine exists? There are known to be two or three definite iodine combinations, but these have not been proved to have the same value. The activity of these combinations may possibly be altered on drying. Again, a mere iodine standard would lead to the practice of fortifying the powder.

Mr. **Maben** said there are other factors that affect the value of thyroideum siccum besides the iodine. Did the author find out whether the glands came from entire or castrated rams or from ewes? He questioned very much whether the value is due entirely to the iodine—it may be due to the phosphorus—adding that the demand for a parathyroid preparation which contains a nucleo-protein may indicate that the activity of the thyroid may be due to a small amount of parathyroid present. The parathyroid is a minute gland, which until recently cost 100*l*. for 1 lb. weight of fresh gland—about 1*s*. 6*d*. a grain.

Mr. **Bennett** thought Mr. Stewart's standard was too high, as it would rule out all the preparations but one which he had examined. He obtained his thyroids from the slaughter-house, but did not go further into the origin. He also said that organic fortification seemed to him a very difficult problem to grapple with.

It was now nearly half-past one, and, after thanking the author for his paper, the members went off to luncheon, which was served at the Queen's Hotel.

THE PRACTICE SECTION.

The afternoon of Tuesday was devoted to the session of the newly constituted Practice Section. It was to have commenced at 2.30 P.M., but it was nearly 3 before sufficient members had arrived to enable the meeting to begin. Mr. J. C. Umney presided, and was supported on the platform by Mr. W. F. Wells (the President of the Conference), Mr. E. S. Peck, and Mr. R. A. Robinson. When the meeting commenced there were about thirty present, but many more arrived, and the numbers were quite equal to those who attended the Morning Session.

Mr. J. C. Umney.

Secret and Proprietary Medicines.

The **Chairman** opened the proceedings by referring to the origin of the section, and then called on Mr. Peck to read an abstract of the answers received from the local Associations in reply to a set of questions that were circulated.

Mr. **Peck** said that the schedule of questions was sent to 88 societies in England, 11 in Scotland, 3 in Wales, and 1 in Ireland. Replies were also received from the local secretaries of the Conference, and these have been tabulated and worked out in percentages.

1. Is the sale of secret and proprietary medicines through the agency of pharmacists considerable in your district?

All replied in the affirmative.

2. Is there in your district, so far as you know, much sale of secret and proprietary medicines direct from the makers to the consumers through the post?

Affirmative, 46 per cent. ; negative, 20 per cent. : doubtful, 34 per cent.

3. Are proprietary medicines ordered by medical men to any considerable extent in your district?

Affirmative, 86 per cent. : negative, 10 per cent. ; doubtful, 4 per cent.

4. If so, is it by prescription or by verbal recommendation?

By prescription, 20 per cent. ; verbally, 20 per cent. ; both, 60 per cent.

5. Are proprietary articles which are ordered in prescriptions usually single substances made by a patent process, or under a protected name (*e.g.*, veronal, stovaine, etc.), or mixtures which any competent pharmacist might be supposed to be able to prepare if the formula were known?

Single, 6 per cent. ; in mixture, 6 per cent. ; both, 84 per cent. ; neutral, 4 per cent.

6. Do you consider that compulsory declaration on the label of proprietary medicines of the names of all the principal ingredients would injure sale of any proprietary articles you know?

Affirmative, 74 per cent. : negative, 26 per cent.

7. If so, are the ones which would be injured such as you would regard as legitimate proprietaries, or are they quack medicines sold at prices greatly above their value by means of specious advertisements?

Injury to quack remedies, 66 per cent. ; to legitimate remedies, 2 per cent. ; both, 22 per cent. ; neither, 10 per cent.

8. Would you regard with favour proposals for legislation on the lines suggested in "6"?

In the affirmative, 70 per cent. ; negative, 24 per cent. ; doubtful, 6 per cent.

10. Do you favour joint action on the part of chemists for the purpose of bringing the present evils of quack-medicine trade clearly to the notice of (*a*) the public, (*b*) the medical profession?

To the public : Affirmative, 64 per cent. ; negative, 28 per cent. ; doubtful, 8 per cent. To the medical profession : Affirmative, 74 per cent. ; negative, 18 per cent. ; doubtful, 8 per cent.

9. Can you suggest any other or better means of checking the sale of quack medicines without injuring legitimate proprietaries?

11. If so, can you make any suggestions as to the steps to be taken at the present time?

12. Any further remark?

The replies to these are arranged as follows :

Edinburgh suggests suppression of unjustifiable advertisements. Should be taken up by some less interested party—*e.g.*, Royal Commission.

Western C.A. and *Chislehurst.*—All medicines advertised should first be submitted to the opinion of a Central Board, medical, pharmaceutical, and lay.

Western Chemists also suggest the establishment of an association supported by medical men and pharmacists for the express purpose of compiling pamphlets for free public distribution, exposing the dangers of self-drugging with such preparations.

Oxford.—The new edition of the British Pharmaceutical Codex should be brought prominently before the notice of the medical profession.

West Ham.—The Chancellor of the Exchequer should be approached with regard to the new National Insurance scheme, and should be urged to suggest to medical men that they should not prescribe secret or proprietary medicines.

Hull.—In regard to Clause 6 it is generally considered that disclosure of principal ingredients would have an injurious effect on chemists' own proprietaries.

Leeds.—Appreciate the importance of subject, and trust that the Conference may carry it to a successful issue.

Portsmouth suggest a petition to General Medical Council asking that more time be devoted to the teaching of prescribing.

Dublin.—Deputation to the General Medical Council and British Medical Association, requesting them to circularise doctors on the advantages of the British Pharmaceutical Codex, and asking them to prescribe preparations mentioned therein.

Grimsby, Cardiff, and *Bournemouth* think misstatements in advertisements should constitute an indictable offence.

Rotherham state that it is difficult to estimate what the doctors prescribe, as they do all the dispensing themselves in the district, or nearly all.

Cardiff would make the new Codex about to be issued the general text-book for the doctor.

Carlisle and *Bournemouth* suggest joint action of the Medical and Pharmaceutical Councils.

Plymouth state that any scheme proposed would have to be carefully considered from all sides.

Great Yarmouth.—Radical reform needed in the relations between medical men and pharmacists.

Middlesbrough only want means for suppressing the sale of worthless proprietaries. Chemists must go very cautiously in interfering with the sale of all.

It seems therefore that the special points to call attention to are these:

(1) It is the unanimous opinion of the local Pharmaceutical Associations that the sale of secret and proprietary medicines through the agency of pharmacists is considerable.

(2) That 86 per cent. are of the opinion that these medicines are ordered to a considerable extent by medical men both by prescription and verbally.

(3) That 84 per cent. are of the opinion that the substances ordered are single substances under a protected name, and mixtures which any competent pharmacist might be supposed to be able to prepare if the formula were known.

(4) That 70 per cent. would welcome legislation making the declaration of the principal ingredients compulsory.

(5) That 88 per cent. agree that such declaration would injure the sale of the so-called quack medicines.

(6) That joint action should be taken by medical and pharmaceutical bodies to bring about a more satisfactory state of affairs.

Replies sent by the Local Secretaries of the British Pharmaceutical Codex work out in like manner.

Mr. Peter Boa would encourage any outside organisation that shows a disposition to move in the matter.

Mr. Goldby (Enfield) thinks it advisable whenever practicable to impress upon pharmacists the undesirability of encouraging in any way the latest development of advertising under the false pretence of a prescription, one of the ingredients of which is a secret proprietary, at a fictitious value.

Mr. Ransom considers that the local newspapers are largely responsible for the abuse of secret and proprietary medicines. Some of them insert advertisements in the form of news, and doubtless impose largely on the uneducated. It should be compulsory to add " Advt." after such insertions. Chemists should avoid advertising in such low-class journals.

Mr. Hutton (Leamington) would educate medical students at hospital.

Mr. Wilson (Southampton) suggests joint action by a committee appointed by the Pharmaceutical Society and General Medical Council, with a view to approaching Parliament.

Mr. Quant (Torquay) feels convinced that pharmacists could do a great deal by making absolutely no display of proprietary articles, and making the utmost use of their own skill and the B.P. Codex.

Mr. Giles (Aberdeen) thinks that the National Insurance Bill will, if it becomes law, tend to stop the sale of proprietaries and lessen unqualified practice.

Mr. Gowen Cross suggests that chemists should cultivate close association with medicine. So long as there is antagonism between pharmacy and medicine each section will to some extent promote quackery.

Discussion.

Mr. E. F. **Harrison**, in opening the discussion, spoke at considerable length. He referred to the attraction which the subject has for medical men, and mentioned what two successive Home Secretaries have done in the matter; and said it is important that pharmacists should examine the subject dispassionately. He then dealt with purely quack medicines which require no qualifications to compound, advertise, or sell at a high price, although the medicine costs almost nothing. Many of the worst examples of this class do not pass through the chemists' hands, but are obtained direct from the maker, some of whom carry on an extensive medical practice in this way. The next class of secret medicines, which is probably by far the largest, contains aperient pills, cough-mixtures, and other medicines which certainly do contain real drugs having activity and usefulness in some, at least, of the disorders for which they are advertised. As a rule, he said, the advertisements of such preparations contain gross exaggerations and false promises, adding that the worst and least scrupulous advertisers force the pace for the rest. He next referred to a somewhat small class of proprietary medicines which are non-secret, such as preparations of cod-liver oil and of petroleum. Others are protected by a trade-mark, their principal ingredients and proportions being set forth on the label. A very strong case can be made out for them. If a man, by his special ability or experience or study, perhaps as the result of costly experiments, discovers some new way of combining certain medicines of known value so that their efficiency is increased, either directly, or indirectly through their being rendered more palatable or otherwise acceptable, nobody will deny that he is entitled to profit by his special knowledge. The price that he puts on these is very defensible. As to chemists' proprietaries being little advertised, there is correspondingly less exaggeration in the claims made, but Mr. Harrison said he knows of cases where chemists advertise their proprietary medicines quite as blatantly and recklessly as unqualified proprietors of nostrums. He considered that if many of these were done away with by legislation they would be replaced by amateur self-drugging on the part of the public. Many chemists' proprietaries are for the treatment of complaints for which hardly anyone would take medical advice—*e.g.*, corn-cures. Reference was next made to proprietary medicines which are not advertised and sold to the public at all, but to the medical profession, who, he pointed out, not being skilled in pharmacy, take advantage of these. Mr. Harrison then discussed the question from the view of the public, contending that the demand for nostrums is partly factitious, and that often the complaints from which people suffer are suggested by the advertisements. There is, however, a *bonâ-fide* demand for medicines suitably compounded, with simple indications as to the complaints for which they are suitable; and this constitutes at present a legitimate field for proprietary medicines. Perhaps when the millennium has arrived, when all prescribing is done by qualified and highly able medical practitioners, and all dispensing by qualified and highly able pharmacists, and no one is so foolish or wicked as to think of doctoring himself in any circumstances, all proprietary or secret remedies may be made an absolute end of. He proceeded to speak of the public point of view dealing with the various suggestions that had been made to control secret remedies, especially declaring the contents on the label, which, he thought, would be justified by the fact that with quite a considerable number of proprietaries, including some having a very large sale at a fairly high price, no secret is made of the nature of the chief ingredients; the secrecy lies in the special skill in selecting the best qualities and combining them in the best way. Most chemists' proprietaries would not suffer materially through the chief ingredients being declared. New legislation on this subject should be preceded by a thorough public inquiry. Publicity and exposure are the worst foes to quackery, and an inquiry by a Royal Commission or similar body would do a good deal in enlightening the public. Any inquiry or exposure by the medical profession or by pharmacists, useful and desirable as these would be, would not carry nearly so much weight, and it would be easy to raise a suspicion of interested motives. Finally Mr. Harrison proposed the following resolution:

> "That this meeting of the British Pharmaceutical Conference is of opinion that a public inquiry, by a Royal Commission or a Departmental Committee, should be held in regard to the advertising and sale of proprietary secret medicines and the law relating thereto, with a view to further legislation for the prevention of fraud and quackery."

Mr. **Wippell Gadd**, seconding the motion, said that it was desirable before considering amending legislation to have a clear conception of the present law on the subject. At present any person can put up a proprietary medicine for sale and attribute to it such properties as a vivid imagination might suggest. It is true that if it contained a scheduled poison it comes within the scope of the Pharmacy Acts, but these Acts do not apply to manufacturers as such. Where proprietary rights are claimed or curative virtues attributed the Medicine-stamp Acts apply, but these too often only serve to lend a spurious air of authority to mendacious audacity. But in framing amending legislation it is important to avoid doing hardship to legitimate interests, and it is most important that a full inquiry should be held. He thought that Mr. Harrison's suggestion that the principal ingredients of every medicine should be indicated on the label, with the quantities of those which are most potent, is a reasonable one. It would help to suppress those medicines which are little better than fraudulent, without, he thought. injuring legitimate interests. Genuine discoverers can protect their ideas by letters patent, and others who present well-known remedies in improved forms have common-law rights which would protect them from colourable imitations.

Mr. **Umney** said he strongly supported the resolution, but there are many ideas as to the best way of carrying it out. As chairman of the Proprietary Articles Trade Association he had heard the views of the manufacturers on this point, and found that they were all prepared to give a certificate of a negative character to show that their preparations do not contain certain injurious ingredients. The new Patent-medicine Stamp would, he thought, make the position of the Government clearer.

Mr. **Heft**, Secretary of the National Food Reform Association and representing the Parliamentary Committee of Food Reform, said he was a child in the matters before the meeting. He then told of the objects of the Committee which he represents, and said they desire the matter investigated. He referred to the question recently put to the Home Secretary regarding the new medicine-stamps, and said that his Committee put a series of questions to Parliamentary candidates, the object of which was primarily to suggest that the subject is worthy of consideration. The speaker continued his remarks for some time in a manner that clearly showed that his claim to being a "child in these matters" was fully justified.

Mr. **R. A. Robinson**, in supporting, congratulated the Conference on the fact that the first resolution introduced under what was described as the Practical Section, but which he might call the Commercial Section, was of such importance. It was calculated to put pharmacists right with the Government, the public, and the medical profession. Who, he asked, would deny that it was desirable that they should do everything they could for the prevention of fraud and quackery? Personally, he very much disliked being in any way made an instrument in promoting fraud and quackery. He could not anticipate there would be any strong objection to the resolution. The legitimate proprietor of some new discovery would always be able to get his reward, but the illegitimate way in which the Press was used, and in which the services of the educated pharmacist, who was compelled to stock such things, were called upon for pushing the sale of the fraudulent preparations of unblushing quacks, had done great harm. He for one should be pleased to see those things swept away. They were the outcome of illegitimate practice of pharmacy. They were made by unqualified persons with very little knowledge of the subject, and were put before the public with the most unblushing effrontery. The resolution would show the public that pharmacists thought the time had come and was ripe for a public inquiry. The Conference had done excellent work in its new department by adopting such a high attitude as the resolution described.

Mr **C. T. Allen** remarked that one point which occurred to him was that many of the craft seemed to act in a direction opposite to that indicated by the resolution. He objected to chemists allowing their names to be advertised in association with secret remedies.

Mr. **Edmund Jones** (Hanley) claimed that he represented the ordinary retail chemist, not the high-class one. There were many present, he said, who had to earn their living by selling proprietary articles. Personally he had to adopt that course very much against the grain. With very little dispensing to do, they had to have recourse to putting up their own proprietaries. He did not know if it was proposed in the resolution to classify proprietary articles manufactured by qualified retail chemists as quackery. At the same time he did not think it right to put proprietaries up in a certain form and tell the public they would cure all sort of diseases. What, he inquired, were they to do in cases like his own, where, not having sufficient dispensing, they had to resort to proprietary articles. He was in hearty sympathy with the resolution, but suggested that a Government Department should be established with which a formula could be lodged or registered without its being published in the Codex, or in *The Chemists' and Druggists' Diary*. Pharmacists who sold their own proprietaries could then satisfy the Department that their medicines or remedies were of a genuine nature, without the risk of being exposed to the competition of unscrupulous exploiters.

Mr. **Middleton** (Nottingham) said that a pharmacist was not committing any fraud in putting up his own proprietaries, but to advertise them under some false name was a very different thing. He took it that the object of the resolution was that the public should not be deceived. If he, personally, advised people regarding the treatment of ailments he might be under the certain ban of the medical fraternity. But if some of the doctors came into his shop and asked him to prescribe, he should do it. (Laughter.) On behalf of the Nottingham Association he warmly supported the resolution.

Mr. **W. Browne** said that the success in their sale was not brought about by the proprietary articles themselves, but by the clever way in which they were advertised. He believed that in many cases their manufacturers had to go to Oxford and Cambridge for services in this connection. The clever way in which they were advertised showed that the announcements made regarding them were drawn up by men from one University or the other. (Laughter.) On behalf of the Western Pharmacists' Association of London he had to say that they were in favour of the resolution.

Mr. **Rutherford Hill** expressed himself in entire agreement with Mr. Jones in his view of one phase of the question. He feared there was a possibility of their being misunderstood. It has been suggested that they were going to claim a liberty for qualified pharmacists which was not to be allowed to any other trader. The resolution involved no such claim. If any registered pharmacist sold a secret medicine in such a way as to involve fraud or quackery they would condemn the practice.

Mr. **J. C. Pentney** (London) thought the Conference had overlooked one phase of the question—namely, the mischief which, he said, was caused by medical men advising and prescribing tabloids and tablets and things of that kind. He believed the chemist suffered more from that than from the sale of patent-medicines. (Cries of "Oh!") There was an immense amount of money in proprietary medicines, and for that reason he thought they should be given a time-limit. He was intimately connected with some large proprietaries, although, at the same time, he did not make undue representation regarding them. He confessed himself embarrassed on the occasion in being unable to speak out quite freely on the subject. He had no doubt that legislation regarding it would come in England as it had come in the Colonies.

Mr. **Kemp** thought that a negative declaration would be of no value. The proprietor of a patent-medicine might say that it contained no morphia or anything of that kind, but of what benefit would that be so far as the practitioner or the public was concerned?

Mr. **W. H. Saunders** (Liverpool) thought that the object at which the resolution aimed could be better brought about if the safety of the public were brought more to the front. The public were very credulous and required safeguarding.

Mr. **Harrison**, in replying to the discussion, said that it had shown throughout that inquiry is wanted. It showed that chemists were agreed that quack medicines included many evils, but that chemists were not agreed as to the steps which should be taken to stop these evils. There was a lot of fraud, but yet they felt that there were many honest proprietaries about, and they did not wish to see the makers of these injured. The case was one for public inquiry. With regard to two or three of the suggested amendments, he did not think it was necessary to specify in the resolution that they had the public or any other interest at heart. They simply put on record what should be done. There was nothing that implied injury to chemists' proprietaries, and it would be hopeless to inquire into one side of the subject. It had been pointed out that what Mr. Churchill half promised the other day was a Select Committee to inquire into it. What he asked for was an inquiry by a Royal Commission, by a Departmental Committee, or by a Select Parliamentary Committee.

The resolution was then put and carried unanimously.

Pharmaceutical Education from the Teacher's Point of View.

At 4.15 Mr. W. F. Wells took the chair, and introduced Dr. F. Beddow, of the Portsmouth Municipal College, who began by saying that after twenty years' experience in teaching pharmacy, pharmaceutical students were the most unsatisfactory of all he had to deal with. They usually came to him much too late, and in most cases their preliminary education was defective. He thought it ought to be compulsory that young men intending to be pharmaceutical apprentices should have a secondary school training, and it was also essential that they should pass the Preliminary examination before apprenticeship. This was not so difficult as many people assumed, for if boys were poor, there were ample scholarships, many of which even went a-begging. The necessary Latin could not be learned in the elementary school. Then a boy should begin to work for the Minor as soon as he became an apprentice, and the employer should arrange to allow the lad off as might be most suitable. A curriculum was in the interest of the master as well as of the pupil. It was proposed that in Portsmouth apprentices should spend six hours weekly in the college, two hours on three days most convenient for the employer, and in three years so spent they could have three full courses in chemistry, two in botany, and one in physics. He thought that the present Minor syllabus was excellent, and he had no fault with the examination, for he found that the hard-working student usually passed. It would be an advantage if they had a written as well as an oral examination in chemistry and botany. He considered they should have more organic chemistry in the examination, even if it compelled them to leave out some inorganic. Botany covered too wide a ground. He would like the examination split up, and the scientific subjects passed before they took the technical; also that students should study pharmacy and materia medica while they were improvers. He would like the examination looked at in a different light. Students usually spent a few months at a school of pharmacy, and went up often four or five times before they passed. By having a curriculum the examiners could see what kind of training the student had had, and make the examination much lighter in consequence.

Discussion.

Mr. Hobbs thought they owed Dr. Beddow a warm vote of thanks for his most instructive paper. Students would only be too glad to find a remedy for the state of things described by him. He agreed that the curriculum should begin with the boy's apprenticeship, and that the Preliminary should be passed first. He instanced what the Grocers were doing in teaching technical subjects, and thought we ought to ignore the commercial aspect when the curriculum is set up.

Mr. Foggan said those who wanted to take apprentices were only too anxious to get assistance and information. He congratulated the Conference on having started the Practice Section with two such practical papers.

Miss Buchanan said we want the highest possible standard for the Preliminary examination, a better standard than they had at present. Ladies came to her and wanted to know what was the easiest examination which their girls could take for the Preliminary. This was a wrong idea altogether. Then she thought it was better to make the compulsory training run parallel with the training in the shop. Students trained in technical colleges alone developed irresponsible and wasteful habits, and she had seen many such whom she would not trust as an assistant. (Applause.) She thought that in the division of the examination the first portion ought to be written.

Mr. Nimmo endorsed the remarks of Dr. Beddow with regard to a curriculum, but he complained that whenever a curriculum was spoken about it was always referred to as a curriculum in a school or technical college. He thought that a curriculum might be passed in a shop as well as in college, and for himself he would be ashamed to send out an apprentice ignorant of chemistry.

Mr. T. Maben wished to congratulate the last speaker on his sense of duty, for there were few who took the same view that he did. Moreover, there were many pharmacists who did not feel themselves competent to instruct their apprentices in chemistry. He believed that teaching apprentices so many hours a week and spreading the teaching over three years was much better than cramming the work into one session before the examination. Such proposals were all very well for Portsmouth and other cities with educational resources, but there are places where such facilities do not exist. The Conference and the local associations could not be better employed than by organising and developing, through the educational authorities, centres where science teaching would be available for their apprentices.

Mr. J. R. Hill mentioned that the Scottish Education Department has now made arrangements by which Latin had not only been shut out of the elementary schools, but also of the higher-grade schools; so that the secondary school was the one to which one was now likely to go who intended to be a pharmacist. While the ideal was to have the Preliminary examination finished before the apprenticeship began, they would find it would not work. The suggestion they had made in Scotland was that the compulsory period of pupilage should follow the passing of the Preliminary examination. In Edinburgh they had a bureau employment agency, the Secretary of which would tell them that he could get any number of boys who were educationally fit to pass the Preliminary examination, but the moment he mentioned the hours of employment, not one of them would enter the calling because of the atrocious hours he would be required to work. It was not the educational difficulty, but the hours of employment, which formed the chief barrier. Remuneration had also to be considered, many professions being much more tempting from a financial standpoint. In Scotland the railway communication was much worse than in England, and the larger proportion of apprentices were trained in places where they had no facilities for science teaching. As Mr. Maben had pointed out, it was easy in a town like Portsmouth to carry out Dr. Beddow's proposals, but in many districts these were not practicable.

Mr. A. R. Smith was of opinion that the pharmaceutical student usually began his work too late. Further, it was all very well to give students lectures, but it was not sufficient for them to attend lectures without time to work at home. Laboratory experience was much more essential than lectures. If a man has gained a practical knowledge of his work he could get up his theory by reading or how he liked. He thought if the examination were divided the standard should be raised.

Mr. Finnemore said that with regard to Latin the time had come when they could do without Latin altogether. (Laughter.) It was very good for mental training, but there was no necessity for retaining it in the Preliminary examination from the point of view of prescriptions. As to facilities for education in England, he thought, there were few places so remote from educational centres that students could not attend by means of a bicycle for science teaching. They should have a concurrent curriculum alongside their apprenticeship, and he considered that the Preliminary should be passed before apprenticeship.

Mr. Harrison also commended Dr. Beddow's paper.

The President said he had been much interested in Dr. Beddow's remarks. In Ireland they had made it compulsory for apprentices to take four years after the Preliminary examination had been passed. He considered that nowadays the personality of the master no longer influenced the school, for the headmasters were, as one had told him, simply machines. In Ireland also they had both written and oral examinations, and made allowance for nervous candidates. In his connection with the Fairchild Scholarships he had found there was a great lack of training in business methods. He then proposed a vote of thanks to Dr. Beddow, which was carried with acclamation.

Dr. Beddow, in responding, said that pharmacists did not get a fair share of the rates they had to pay. Special classes suitable for their apprentices could be had in every locality, and they should approach the local authorities for facilities. These authorities would be most willing to provide the teaching, and would even pay the travelling expenses of the students to the centres. (Applause.)

National Insurance Bill.

Mr. Umney again took the chair, and in introducing the National Insurance Bill to the notice of the meeting, reminded them that the whole subject was threshed out at the great meeting of pharmacists in London. At the same time it was desired that at that meeting they should confirm the conclusions come to by the Committee in

Conference with that of the British Medical Association. The Executive were particularly anxious to confirm the resolutions then come to because the British Medical Association had not confirmed the resolutions passed at that joint Conference. They had been properly treated by the General Medical Council, who had supported pharmacy in every way, but this could not be said of the British Medical Association.

Mr. Peck then read the resolutions passed at the joint Conference held on June 15.

Mr. Gamble (London) then formally moved their adoption, and this was seconded by Mr. R. R. Bennett and agreed to.

Mr. R. A. Robinson said that although pharmacists held a very large and influential gathering at the Holborn Restaurant a short time ago, and on that occasion expressed their opinions very strongly, the Executive thought it would not do for the Conference to meet without taking notice of such an important subject at that juncture. The suggestion had been made to him that it would be a good thing if they despatched a telegram to the Right Honourable the Chancellor of the Exchequer, informing him of what they had done. The further suggestion had also been made that in addition to this telegram forwarded by the Conference, the members should each send a separate telegram to his own member of Parliament asking him to support the views put forward by the Joint Committee, which Mr. Glyn-Jones had put before the House. The suggested telegram to the Chancellor of the Exchequer was in the following terms :

The British Pharmaceutical Conference, at its forty-eighth annual meeting—present, pharmacists from all parts of the United Kingdom, and representatives from Colonies—ask your earnest consideration and support of the principle regarding supply of medicines advanced by General Medical Council and Pharmaceutical Societies of Great Britain and Ireland. The Conference trusts that such supply will be arranged by Health Committees with duly qualified pharmacists, subject to Pharmacy Acts provisions, as embodied in Glyn-Jones' amendments.

On behalf of Conference :

W. F. Wells (Dublin), President.
John C. Umney (London), Chairman of Practice Section,
E. Saville Peck,
Horace Finnemore,
Secretaries.

Mr. Umney, replying to a question put by Mr. Foggan, explained that the General Medical Council was quite distinct and apart from the British Medical Association. In the first instance the British Medical Association in conference with the British Pharmaceutical Conference agreed to certain resolutions. The Pharmaceutical Conference had confirmed these, but the British Medical Association when they met did not do so because of dissentients in their own body. The General Medical Council, on the other hand, were perfectly firm on the point that dispensing should be done by pharmacists by a generous recognition of the Pharmacy Act. In the resolution they particularly refrained from mentioning the British Medical Association, but referred only to the General Medical Council as the leading body in medicine, just as the Pharmaceutical Society was the mother-body of pharmacy.

Sir William Baxter seconded the proposal submitted by Mr. Robinson.

Mr. Edmund White, in referring to what he described as the critical condition of affairs arising under the Bill, said that at the beginning most of them felt that the real crucial point was whether they were to get recognition on the part of the Government and of the medical men. It appeared to him that unless they received this recognition the Bill would not matter to them. The point they had to press upon the Government was that the Legislature in 1868 entrusted the Pharmaceutical Society with educational and examinational powers in the administration of an Act for the regulation of pharmacy. If fifty years after, the first Bill dealing with the matter was to find that the whole thing was a sham, it was time they should approach the Government and say : "If you will not give us the things we have trained ourselves and our men for we will refuse to act altogether." All the talk about the curriculum was sheer nonsense unless they got the recognition to which they were entitled. What would be the good of training men for work they would never get to perform? If the Bill passed without the necessary recognition being given it would not be worth while to educate anybody at all for pharmacy.

The proposal was then agreed to.

Mr. Umney read the following telegram, which it was suggested should be sent by each member to his Parliamentary representative. It was in the following terms :

Trust you will support Glyn-Jones' amendments to Clause 14 Insurance Bill for supply of medicines by duly qualified pharmacists. British Pharmaceutical Conference in Session addresses Lloyd George on subject.

Mr. Feaver Clark and Mr. J. R. Hill questioned if it would be necessary to send such a telegram to members who had already promised support, but Mr. Umney replied that Mr. Glyn-Jones had said that the suggested method of bringing pressure to bear would be very helpful to him, although he knew he had the pledged support of 150 members. Mr. T. H. W. Idris also said he was sure that if it was a second, third or fourth telegram it would have its effect. "Put as much pressure as you can on your representatives," he continued, "and many telegrams will show your earnestness in the matter. We can wreck this Bill if we cannot get the justice we ask for." (Loud applause.) The terms of the telegram having been agreed to, it was stated by Mr. Umney that the one to the Chancellor of the Exchequer would be sent when next the Bill comes up for discussion, and that he would then advise as to the transmission by members of the Conference of the wire to their respective Parliamentary representatives.

Wednesday's Session.

There was a heavy thunderstorm during the night, but the rain gradually gave way to brilliant sunshine. The meeting opened at 10.45 with about twenty members present.

The first paper read by Mr. Finnemore was

Linimentum Ammoniæ.

By F. H. Alcock, Ph.C.

The author's attention was directed to two samples of lin. ammoniæ by a Birmingham firm of pharmacists, which had gone quite solid and could not be removed from the bottle. Attempts to "thin" the mass were unsuccessful, and experiments were conducted to try to prevent solidification. The author reviewed the many suggestions that have been made to prepare a perfect product, and as a result of experiments found that the best preparation is obtained by leaving out as much of the water as possible. The formula arrived at was as follows :

Almond oil...	3 ounces
Olive oil	8 ounces
Strong solution of ammonia (0.880 of commerce)	1 ounce

The product is not so elegant as the fresh official preparation, but it is very effectual. Olive oil alone may be used in the formula instead of the mixture of almond and olive oil. The product would still require a "Shake-the-bottle" label.

Discussion.

Mr. Pollard said that two years ago at Newcastle he read a paper on emulsion, in which he gave a *résumé* of an examination he made of hartshorn oil. On that occasion he expressed the opinion that it was one of the finest preparations in the Pharmacopœia. It yielded a perfect emulsion, and the stearine in an emulsion so prepared was more regular than in any other preparation he could get. If they got their oils from a good house they would be all right. In the majority of conditions with a 90-per-cent. emulsion they would get a solid. From his experience this would be a worse preparation than the Pharmacopœia one. Made with good oils, not with acid oils, it made a very fine preparation indeed.

Mr. Naylor agreed that much of the trouble with the liniment is due to the acidity of the oil. He would like to know how long the sample had been kept, because it is well known that it is on keeping for a considerable time, and under varying temperatures, that causes an increase in density and solidification.

The author, who was not present, was accorded a vote of thanks.

The next paper was as follows :

The Moisture and Ash-contents of Medicinal Extracts.

By Kenneth C. Allen and Theodore Brewis, F.I.C.

A Search through recent pharmaceutical literature fails to supply any definite figures for the moisture and ash-contents of solid extracts. The official requirements of the B.P. 1885 were vague, even to the extent of ordering the evaporation of extracts "to a suitable consistence," and although the instructions of the 1898 Pharmacopœia are somewhat more explicit, such directions are still found as "to the consistence of a soft or a firm extract" or to "dryness," terms which admit of wide interpretation. The phrase "to a pilular consistence," which is used in some of the monographs of the U.S.P., is open to the same criticism. The P.G.V. 1910, in general directions applying to solid extracts, divides them into three classes—viz. :

(1) Thin (*dünne*)—having a fluidity equal to that of fresh honey.
(2) Thick (*dicke*)—non-pourable when cold.
(3) Dry (*trockene*)—dry enough to powder.

Formulæ also are given for the production of diluted narcotic extracts (1+1) in both liquid and powder forms.

The French Codex 1908 distinguishes four kinds of extracts—viz. :

(1) Fluid—prepared by percolation, and equivalent, weight for weight, to the powdered air-dry drug from which it is made.
(2) Soft (*mous*)—having a consistence of thick honey.
(3) Firm (*fermes*)—do not run when cold, and when dried at 110° C. lose from 15 to 20 per cent. in weight.
(4) Dry (*secs*)—which are easily powdered.

The want of more precise directions in the Pharmacopœias leads from time to time to uncertainties with regard to the physical condition of the extracts, the authors mentioning the case of ext. belladonnæ alc. as an illustration of this point. It is, of course, recognised that the more potent extracts must be standardised on a potency basis of chemical or physiological methods. Such extracts are best presented in the form of dry powders, which can be easily weighed with the accuracy necessary for apportioning the small doses in which they are usually prescribed. Farr and Wright have ably set forth the many advantages of the powdered crude drugs suggested by them as diluents, and the authors recommend their employment, provided they are finely powdered, so that the particles present the greatest possible surface in proportion to the weight required for standardising the extract. In the case of extracts which are standardised on the basis of the weight of crude drug taken for their production, such as ext. cascara, and others in the U.S.P., the authors hold that this procedure is open to criticism, as it makes no allowance for the varying yields of extractive in parcels of drugs obtainable from one time to another, and they consider it better to base a standard on the weight of really dry extractive actually obtained. For the rest, soft extracts—gentian, taraxacum, and the like—or dry extracts, such as aloes and cascara, definite limits of moisture should be prescribed, and the authors believe that this would be found not only advantageous to the user, but also easily attained in practice by the manufacturer.

Extract	Moisture, dried 100°–105° (per cent.)	Ash (per cent.)
Aloes barb.	6.74	1.63
Anthemidis	33.9	9.92
Belladonnæ alc.	23 7	3.01
,, virid.	28.3	15.05
Cannabis ind.	10.5	0.24
Cascaræ sagradæ	13 32	5.54
Colchici	33.1	8.59
Colocynth. co.	14.81	4.97
Ergotæ	22.5	14.55
Euonymi sicc.	7.4	27.8
Gentianæ	27.1	4.22
Glycyrrhizæ	33.54	6.35
Hyoscyami virid.	25.89	17.57
Jalapæ	25.58	1.83
Krameriæ	10 34	3.29
Nucis vom.	22.13	2.69
Opii	22.16	3.6
Physostigmatis	9.51	1.27
Rhei	13.64	5.78
Stramonii	22.13	8.93
Strophanthi	4.89	0.08
Taraxaci	29.05	6.24

The authors submitted the above table of figures for moisture and ash obtained on a series of pharmaceutical solid extracts.

Discussion.

Mr. **Ransom** agreed as to the variation of the percentage of water in extracts. He had found from experience that the water in the green extracts—belladonna and hyoscyamus—varied from 20 to 25 per cent. In regard to ext. cannabis indica, he found on one occasion that this only contained 5 per cent. of water, although of proper consistence, which was due to the proportion of fixed oil present. If standards are introduced into the Pharmacopœia, these should be wide, so as to allow of a variation in the winter and summer consistence. It is often necessary to stiffen extracts for warm climates.

Mr. **Farr** said that one point he desired to raise was that in different situations and at different periods of the year the variation of moisture was very great indeed. If they were kept in a dry, warm situation the extracts became stiffer. On the other hand, at certain times of the year, and especially by the seaside, there was a great tendency for them to become quite soft. An extract of firm consistency when freshly made might easily become pourable in very damp weather. Of course, that was one reason why the powdered extract was an advantage. By keeping them in bottles carefully stoppered they could be retained in a dry condition. The ordinary extract, however, was not so easy to store or to maintain it in a definite condition of consistency.

Mr. **Umney** said the question of including in the B.P. the percentage of water, extractives, and alcoholic strengths had been considered, and the Committee of Reference has come to the conclusion that it is inadvisable to include such standards as those referred to because of the use of the Pharmacopœia as a standard without any other evidence under the Sale of Food and Drugs Acts. The inclusion of the figures for extractive in tr. benz. co. has given rise to vexatious prosecutions, and subsequently such things as the amount of acid in vinegar of squills. After careful consideration they came to the conclusion that it would be unwise to include in the Pharmacopœia standards that had been mentioned. The figures are welcome for the use of the wholesale and retail pharmacist, but it would be unwise to put them in the Pharmacopœia.

Mr. F. J. **Kirby** said that the powdered extracts very soon get into a lump, and ordinary extract as sent out soon gets soft and unsightly and fermentation sets in.

Mr. **Brewis**, in reply, said that the consistence of cannabis-indica extract varies even when allowance is made for the water. In regard to fixing wide standards, the French Codex mentions 15 to 20 per cent. The subject was brought forward because there has been nothing published, or at least nothing but what is very vague. The variation in the consistence of extract varies according to the time of the year, probably due to the mineral salts in the extract. This is not surprising when one considers that extract of hyoscyamus contains 17 per cent. of ash, probably almost all potassium chloride. There is a great deal more work to be done on powdered extracts, owing to the difficulty in getting dry extracts that will remain in powder-form. Extracts ought not to ferment ; such change would be due to the extract being too soft—it may be that the manufacturers have interpreted the B.P. instructions from the point of view of the cost-book.

The next papers were :

Note on Arsenates of Strychnine.

By D. B. Dott, F.R.S.E.

The salt $B_2.H_3AsO_4$ seems to exist, but it is sparingly soluble and apparently partly decomposed in presence of water. There are, however, two well-defined salts, both fairly soluble in water. In the first place, there is the generally recognised acid-salt $B.H_3AsO_4.2H_2O$. The water is not wholly lost in the water-bath, but the salt is anhydrous at 120° C. ; probably three-quarters of the water is driven off under 100° and the remainder at the higher temperature. The solubility in water at ordinary temperature was found to be 1 in 34. The second acid-salt does not appear to be so generally known. It has the composition $B.(H_3AsO_4)_2.H_2O$, and is soluble in 16¾ parts of water at ordinary temperature. This tendency to form extra-acid salts, like "quadroxalate" of potash, is exhibited in other alkaloids, notably in the case of quinine. Though it has the advantage of greater solubility, the proportion of strychnine is, of course, much less.

Note on Strychnine Hypophosphite.

By D. B. Dott, F.R.S.E.

The ordinary books of reference do not describe the hypophosphite of strychnine. It crystallises with the composition indicated by $B.H_3PO_2.3H_2O$, all the water of crystallisation being lost at 100° C. It is one of the most soluble of the strychnine salts, being dissolved by 3.3 parts of water at ordinary temperature.

Discussion.

Mr. Harrison inquired as to the conditions that determine the formation of the two arsenates.

Mr. Dott replied that that depended on the amount of acid employed.

The next paper was :

Note on Spirit of Nitrous Ether.

By D. B. Dott, F.R.S.E.

The liability to deterioration of spirit of nitrous ether is officially recognised by permitting a variation in strength of from 2.6 to 1.75 per cent. of ethyl nitrite, but even the lower figure does not prevent frequent prosecutions for the sale of a spirit under the minimum strength. The loss occurs almost entirely by volatilisation of the ethyl nitrite, which loss, under the practical conditions of dispensing, it is difficult to avoid. In a former paper the author suggested the mixing of a strong aqueous solution of sodium nitrite with alcohol containing an equivalent of sulphuric acid, filtering off the sulphate of soda, and washing with alcohol to the proper volume. This method may be useful for preparing a small quantity as required, but it occupies some little time, and the considerable amount of alcohol retained by the sulphate is also an objection. What the author now proposes is that no spirit of nitrous ether should be kept in stock at all. There would be two solutions, like Fehling No. 1 and No. 2, which would be mixed when dispensing, ½ dram of solution of sodium nitrite with 7½ drams of acidified alcohol, to make 1 oz. of spirit of nitrous ether. In order to avoid the formation of a precipitate it is necessary to use an acid which forms a sodium salt soluble in alcohol, and obviously the sodium salt should not have any marked medicinal action in small doses. Further, the acid should not react appreciably with the alcohol, so that a bottle of the acidified spirit could be kept for a reasonable time. I suggest lactic acid as meeting all the requirements, but there may be a better. It seems to me that this plan of making the preparation at the moment of sale is the only practical way of overcoming what is undoubtedly a serious difficulty. I need scarcely say that the proposal is only made in view of the forthcoming Pharmacopœia, and that the spirit so prepared would require to be approved and passed by the Medical Committee.

Discussion.

Mr. Peck said the method, if workable, seemed easy of adoption. He would like to know whether the formation of ethyl nitrite is immediate, and if the mixed solution is as permanent as the present spirit. æther nit.

Mr. Farr did not agree that the proposed solution would be a substitute for spirit. æther. nit., but it might be used in place of sol. æther. nit. The spirit is taken more as a sudorific, and the amount of aldehydes is not negligible.

Mr. Umney said it has been suggested that the synonym "sweet spirit of nitre" should be omitted from the Pharmacopœia, as the official spirit does not represent the old sweet nitre upon which the fame of the drug was built up. The Chemists' Defence Association advocate that the bottom limit for ethyl nitrite should be lowered; and looking through the cases which have come before the Courts it is obvious that the chemists who have been prosecuted have been much misunderstood in their own neighbourhood. Their fellow-townsmen would think that a dreadful offence had been committed, whereas what happened was particularly trivial. The Committee of Reference in Pharmacy has consulted the General Medical Council in regard to leaving the synonym out of the new Pharmacopœia.

Mr. J. R. Hill said it is patent that they are dealing with two entirely different preparations: sweet nitre is not merely a solution of ethyl nitrite, but a drug prepared by a complex process which results in a particular product. He knew of products which are perfectly satisfactory in use, but would have been condemned on their ethyl nitrite content. There is no doubt that the physiological action of ethyl nitrite is required by some practitioners, and for them a solution of ethyl nitrite is suitable. Mr. Dott's method would be good for this.

Mr. Finnemore asked whether experiments had been made to prove the rate of hydrolysis due to the excess of lactic acid on the ethyl nitrite.

Mr. Pollard said all chemists are liable to prosecution in selling sweet nitre. A friend of his prepares it four times the strength and dilutes it in sufficient quantity to last a week or so by the aid of a nitrometer.

Mr. Harrison said that friend is in danger of falling into another error in supplying a spirit which is not B.P., although it may contain the proper quantity of ethyl nitrite. It is not advisable to restrict the name "sweet nitre" to the B.P. preparation.

Mr. Dott, in reply, said the reaction is fairly rapid, as is evidenced by the development of odour and the separation of ethyl nitrite on cooling in a freezing-mixture. The solution is not quite so permanent as the spirit, but then it is not intended to be kept, but prepared extemporaneously. A stronger spirit would keep better. He regarded sweet nitre more as a domestic remedy, and was not able to state whether medical men require the ethyl nitrite along with traces of paraldehyde, etc. He did not approve of reducing the ethyl nitrite standard. The solution tends to hydrolyse on keeping, but keeps for a reasonable time.

The author having been thanked for his papers, the following was read :

Note on Solution of Sodium Ethylate.

By H. Finnemore, B.Sc.

Solution of sodium ethylate is used in medicine as a caustic to a limited extent. According to the official description it is a colourless liquid becoming brown by keeping. As it is only employed occasionally, it usually happens that when required the stock is dark-brown in colour, and although its medicinal properties are not affected by this coloration, yet the preparation is then unsightly and the user is apt to assume that deterioration had accompanied this change. This change of colour is due to the action of the alkali on the acet-aldehyde, which may be shown to be always present in small quantity in commercial absolute alcohol.

Various methods were tried to get rid of this impurity, and the most successful was found to be that of Hewitt, who used sodium phenyl hydrazine sulphonate to remove the objectionable aldehydic constituents of whisky ("J.S.C.I.," 21, 96). The alcohol was boiled for one hour with the reagent mentioned, and distilled. The distillate contained no aldehyde, but when kept for some time aldehyde gradually re-formed, and the solution of sodium ethylate made therefrom became discoloured.

In using sodium ethylate for its hydrolytic effect in experiments on another subject the author observed the great depth of colour of the resulting solution when this was used, as compared with the absence of colour when sodium methylate was employed. The use of methyl alcohol in place of ethyl alcohol in such a caustic solution was therefore suggested, and a sample of solution of sodium methylate, using Kahlbaum's No. 1 methyl alcohol, shows no trace of discoloration after two years.

Discussion.

Mr. Naylor asked whether oxidation takes place in the methyl alcohol, or is the suggestion merely one to overcome the unsightliness of the solution.

Mr. Peck asked whether sodium ethylate has not been superseded by compressed carbon dioxide.

Mr. Whigham said that he had had the solution returned by a dentist owing to the discoloration, and with the statement that it does have the same effect as when freshly made.

Mr. Harrison asked whether the caustic action is identical.

Mr. L. R. Smith thought that the sodium ethylate is so easily prepared that it should be made freshly.

Mr. Brewis asked whether methyl alcohol could be used for making alcoholic potash, which often discolours on keeping.

Mr. Finnemore said that made with ethyl alcohol a dark polymer is produced on keeping, but in the case of methyl alcohol this is not coloured. Carbon-dioxide buttons are not so readily available as sodium ethylate. Medical men have an idea that if the solution has darkened it is bad, and it is to avoid that impression that the note was brought forward. Methyl alcohol is more expensive than ethyl alcohol for preparing alcoholic potash.

The author was thanked and the following paper was taken, read by Mr. Ransom :

An Experiment in Peppermint Culture.

By H. John Henderson, Ph.C.

The idea of growing peppermint in the shade had its origin in a statement in Sawyer's "Odorographia," to the effect that Mr. Burnett in 1816 first distilled peppermint oil in Wayne County from plants which he found and gathered on the banks of a little stream. The yield of oil was such that either the peppermint must have been growing very freely by the banks of the stream, or the plants must have contained an unusual percentage of oil. The author holds the opinion that yield of oil per acre is the only factor worthy of consideration in a commercial aspect, the percentage of oil yielded by the plants having an academic interest only. Schimmel found the fresh herb to yield 0.3 per cent. and the dry 1.25 per cent., while W. Ransom & Son have found the fresh herb to yield from about 0.2 per cent. to 0.4 per cent. The experiment was tried of growing peppermint on the banks of a stream which bounds the herb-garden of W. Ransom & Son at Hitchin. Care was taken to employ healthy stock, and Mr. Holmes's opinion was obtained as to the plant being of the proper species. The plants grew and flourished exceedingly, and on distillation on September 2, 1909, before flowering, the yield of oil was found to be 0.1 per cent. from the fresh herb. The odour was good. The yield of oil from ordinary plants cut when in flower, grown on the farm, was 0.409 per cent. The experiment shows that the yield of oil is not increased by growing peppermint in damp and shady situations. The following table was appended to the paper :

Peppermint Oil.

Yield	Sp. Gr.	α_D	Combined Menthol (per cent.)	Free Menthol	Total Menthol
(1) *From plants grown on river bank and distilled before flowering.*					
0.1 per cent., 11¼ lbs. per acre ...	0·9046	−27	3.9	55.3	59.2
(2) *Grown on a heavy loam with chalky subsoil,* 1909. (*In flower.*)					
0.409 per cent.	0.9065	−27.4	5.57	55.78	61.35
(3) *Grown on a deep sandy loam,* 1910. (*Mixed plants in flower.*)					
0.19 per cent., 26¾ lbs. per acre ...	0.9046	−28.2	4.74	54.72	59.46
(4) *Ransom's,* 1907-1910.					
Year 1907 ...	0.9085	−30.7	6.69	56.17	62.86
,, 1908 ...	0.9090	−28.6	7.8	56.21	64.01
,, 1909 ...	0.9065	−27.4	5.57	55.78	61.35
,, 1910 ...	0.9058	−29.7	9.47	55.31	64.78

Discussion.

Mr. Deane said damp positions are often better for the growth of peppermint, especially in a year like the present.

Mr. Brewis inquired whether a more soluble oil is obtained by allowing the plant to dry before distilling, or by distilling in the fresh condition. Some American brands differ very much in solubility in 70-per-cent. alcohol, and some Mitcham oils are not entirely soluble.

Mr. Umney said he had recently been over the peppermint district at Pancahera, in Italy, and the Alpês Maritime, and was able to say that he has recently examined the oils distilled from the fresh and dried plant respectively. That from the fresh plant gave 23 per cent. of ester, and the dried plant 15 to 16 per cent., but he could not say if this was a constant. The peppermint in Italy is from English stock, but yields three to four times the oil that is obtained in England.

Mr. Ransom thought that the oil from the fresh herb is preferable.

The following paper was then taken :

The Composition of Diabetic Foods.

By F. W. F. Arnaud, F.I.C.

Gluten bread and flours only are dealt with. Twelve different samples, the product of seven manufacturers, were examined, and the products of one manufacturer alone can be said to be satisfactory. The advertisement matter issued by many of these firms is of interest : one firm submits that its products are more nutritious than any other preparation of the kind ; again, a statement advertised very generally is to the effect that the starch present in the foods has been altered by special methods, and exists in a modified form so that it can be digested and assimilated by the diabetic subject. The statement that the starch is appreciably altered cannot be confirmed either by the qualitative iodine-test or the microscope. A sample of an expensive diabetic food was found to consist of ordinary flour which had merely been heated. The following are the results of the author's analyses :

Sample	Water	Fat	Sugar, etc.	Dextrin	Starch	Protein	Ash	Cost per lb.
1A Diabetic bread...	9.65	0.45	3.27	0.63	7.66	76.22	2.10*	3/6
2A Diabetic biscuits	4.30	17.50†	2.25	1.00	6.81	65.90	2.71	8/-
3A Diabetic flour ...	7.10	0.42	1.00	0.51	5.80	86.19	0.85	2/-
4A Diabetic bread...	32.50	1.10	1.30	3.50	50.3	13.2	0.50	8*d.*
5 ,, ,, ...	38.38	1.04	0.54	5.52	44.50	9.87	1.50	—
6 ,, ,, ...	9.0	1.30	1.35	4.21	50.01	34.53	0.95	2/10
7 ,, ,, ...	36.32	0.68	0.24	9.76	46.41	7.94	1.15	7*d.*
8B ,, ,, ...	32.95	0.75	0.60	9.90	48.23	8.12	1.20	6*d.*
9B Diabetic flour ...	9.45	1.50	1.12	6.80	70.15	11.56	1.60	7*d.*
10C Diabetic white bread	33.20	1.04	0.30	4.20	44.10	17.94	1.50	6*d.*
11C Diabetic brown bread	32.95	0.41	1.30	4.07	40.10	22.02	1.55	6*d.*
12C Diabetic food ...	5.05	1.15	1.65	6.58	70.51	13.39	2.65	2/6

* Contained P_2O_5 0.43 per cent.

† Hanus value 75.7 per cent. iodine. Refractive index at 35° C. 1.4685. Reduced Bechi solution.

Method of Analysis.

Two grams of the prepared and powdered sample was weighed out and dried at 98° C. The water was usually found to have been expelled after four hours and the sample to have attained constant weight. The residue was then placed in a fat-free cartridge, and the fat extracted in a Soxhlet apparatus with either dry ether or petroleum ether. Identical results may be obtained by the use of either of the solvents. The extracted fat was dried and weighed. One hundred c.c. of 93-95 per cent. by volume alcohol was then poured into the fat-free residue, which had been transferred from the cartridge to a beaker. After frequent stirring during four hours or so the alcohol was filtered off, the residue washed with a few c.c. of alcohol, and the filtrate evaporated, this residue being assumed to be sugar. As 95-per-cent. alcohol only dissolves about 0.23 gram cane-sugar per 100 c.c., the above method of extraction would not be suitable if the percentage of sugar in any sample approached 10 per cent. In such a case the sample would have to be extracted with alcohol in a Soxhlet apparatus. To the fat and sugar free sample 180-200 c.c. of cold water was added and allowed to remain several hours with frequent stirring. The aqueous solution, after filtration, was made up to 250 c.c. The nitrogen was determined by the Kjeldahl-Gunning process on 150 c.c. of this filtrate, and 100 c.c. was evaporated in a platinum basin and the weight of dry residue ascertained. The ash contained by this dry residue was then determined. The percentage of dextrin was ascertained by deducting the sum of the ash and proteins found in the aqueous extract from the amount of dry residue it contained. It is essential that the nitrogen and ash should be determined on this aqueous extract, for in the case of the genuine gluten bread over 5 per cent. of proteins are present in solution, and frequently the ash is found to approximate the total ash of the sample. Usually the solution was found to contain between 1 and 2 per cent. of proteins.

The starch in the dextrin-free residue was converted into dextrose by means of the hydrochloric-acid process, and estimated gravimetrically, using Fehling's solution.

Many of the starch determinations were confirmed by means of the diastatic process, but in the case of ordinary bread the author found the conversion of the starch slow, and therefore a tendency for the determination to be low. The diastatic process was, however, easily carried out with the genuine gluten-products containing only a small quantity of starch. Though the hydrochloric-acid method probably gives results a little high, it is expeditious, and duplicate experiments agree extremely well. The following is Buisson's process for the direct estimation of starch. The author did not find the method applicable to the estimation of starch in bread, but it works admirably with starch alone :

A weighed quantity of starch is heated with a dilute solution of picric acid, the rotation of the resulting solution being observed. A saturated solution of picric acid is prepared (about 12 grams dissolving in a litre of water), and 50 c.c. of this solution, together with 80 c.c. of distilled water, is added to 5 grams of starch contained in a 300-c.c. flask. The mixture is shaken and heated to 115° C. in an oil-bath for thirty minutes. The liquid is then thoroughly cooled, made up to 200 c.c., and filtered after the addition of a little kieselguhr. The rotation of the filtrate may then be observed in a 5-Dm. tube with ease. The proteins are calculated from the total nitrogen estimation, the factor 6.25 being employed. The Kjeldahl-Gunning process is employed for the determination of the total nitrogen.

The results of the analyses given in the table make it expedient, Mr. Arnaud concluded, that steps should be taken for the repression of the business carried on in the sale of ordinary bread and flour as specially recommended diabetic foodstuffs, or the composition of these foodstuffs should be declared to the purchaser.

Discussion.

Thereafter followed one of the longest discussions of the Conference.

Mr. Gamble thought action should be taken in the matter, which revealed a scandalous state of affairs.

Mr. Deane said reform is needed in the law if it is powerless to touch such cases.

Mr. J. R. Hill pointed out that if prosecuted a maker might argue that his diabetic food is intended to produce diabetes. He thought such foods could be brought within the scope of the resolution regarding proprietary medicines which was passed by the Practice Section.

Mr. Umney had found 42 per cent. of starch in a food he recently examined, and he certainly thought that the literature sent out with that food made possible a prosecution under the Merchandise Marks Act.

Mr. Harrison said papers on the subject have been before the Conference before. He was glad to see the public analyst associating with the pharmacist; these two should keep in touch. He regretted that the names of the makers of the foods were not given. There are some casein biscuits on the market which are above suspicion. In regard to the diastasic method, he had found it satisfactory if finished with acid. There have been analyses published in the medical journals with the names attached.

Mr. Maben said it would be better to make it compulsory to state the proportion of starch on the label of these foods. It would then be simple to get at cases of false statements. The makers of these foods would easily get experts in the witness-box to state that medical men now favour the administration of starch to diabetic patients. The starch is often claimed to be in a soluble form.

Mr. Finnemore said various manufacturers of diabetic products had been invited to the Conference, but have not responded.

Mr. Peck asked whether the author knew of any way of altering starch which made it more suitable for diabetics.

Mr. Brewis asked how far it was possible to make a food free from starch. Soya-bean cake has been employed as a diabetic food for the last ten years.

Mr. Crossley-Holland pointed out the medical opinion is divided as to the use of starch by diabetics. The whole question would be solved by the introduction of a protein that would retard the carbohydrate metabolism.

Mr. Stephenson referred to the action of jambul-seeds in retarding the conversion of starch into sugar. When he placed a paper before the Conference on this subject some years ago he was somewhat severely criticised, and was told it had nothing to do with diabetics. The disease is far from well understood.

Mr. Hill proposed that the results of Mr. Arnaud's paper should be communicated to the Home Secretary, so that action could be taken for the protection of the public.

Mr. Naylor advised caution. He said that the meeting is assuming that a food may not be suitable for diabetics unless it is free from starch. There is a distinct division of opinion among medical men regarding this, and it was hardly for chemists to step in and decide so delicate a question.

Mr. Umney suggested that Mr. Arnaud might communicate the figures to Mr. Harrison, who would bring them before the notice of the Joint Standing Committee, of which he is Secretary.

Mr. L. R. Smith said that he believed that carbohydrates have a great effect on the metabolism; without carbohydrates it is not possible to retain proteins.

Mr. Hill withdrew his suggestion, but pointed out that if a medical man wished the food to be starch-free his whole object would be frustrated.

The President said the matter is not so easy to deal with as it appears. The Sale of Food and Drugs Acts need amendment. The case is one for medical men to decide.

Mr. Gadd supported a cautious action. He suggested that the most that could be done would be to place the matter before the Executive.

Mr. Arnaud, in reply, said he certainly thought that starch at 2*s*. 10*d*. a pound was not a suitable food for a diabetic patient. Medical men now give starch up to the toleration-limit, and if sugar is produced the starch is cut down. It requires overwhelming evidence for a successful prosecution under the Sale of Food and Drugs Acts. This country badly needs a Dr. Wiley to enforce the food-adulteration laws. Bread can be made with less than 5 per cent. of starch, but such bread is difficult to eat—it is like matted string. The definition of food in the Sale of Food and Drugs Acts is very wide: it has even been said to include the saucepan and cook. (Laughter.)

Mr. Umney then proposed the following resolution:

"That the chemical results published in Mr. Arnaud's paper on diabetic foods be referred to the Executive Committee to consider the advisability of communicating them to the British Medical Association."

Mr. Postlethwaite seconded this, and it was carried unanimously.

The paper next taken was

Note on the Constitution of Commercial Bismuth Subchloride.

By J. Bristowe P. Harrison, F.I.C.

The subchloride of bismuth is not official in the British Pharmacopœia. The directions for preparing it given in the British Pharmaceutical Codex are as follows: (1) "By adding a solution of bismuth nitrate to a solution of sodium chloride." (2) "By adding a solution of bismuth nitrate to very dilute hydrochloric acid." (3) "By pouring a solution of bismuth oxide in hydrochloric acid into water." These three methods depend on the insolubility of the oxychloride in very dilute nitric or hydrochloric acids.

In a paper relating to the constitution of commercial bismuth subnitrate ("Analyst," 1910, 35, 118) the author showed that the constitution of bismuth subchloride prepared by heating bismuth subnitrate with solution of sodium chloride is represented as $Bi_{12}O_{13}Cl_{10}$, and not by the simpler formula BiOCl, as has previously been supposed. This fact has an important bearing on the constitution of commercial bismuth subnitrate—viz., $6Bi_2O_3,5N_2O_5,8\frac{1}{2}H_2O$—as seen in the following equation:

$$6Bi_2O_3,5N_2O_5,8\tfrac{1}{2}HO+10NaCl+xH_2O$$
$$=Bi_{12}O_{13}Cl_{10}+10NaNO_3+(x+8\tfrac{1}{2}H_2O).$$

The fact that a commercial sample of bismuth subchloride having been analysed and found to contain 11.78 per cent. chloride—which is slightly in excess of that required by the constitution $Bi_{12}O_{13}Cl_{10}$—led the author to prepare samples according to the methods given in the British Pharmaceutical Codex in order to determine their constitution. Three preparations, each weighing about 10 grams, were obtained, and the chlorine determined gravimetrically as follows: (1) 13.6 per cent.; (2) 13.77 per cent.; (3) 13.85 per cent.

The compound $Bi_{12}O_{13}Cl_{10}$ contains theoretically 11.59 per cent. chlorine, while 13.66 per cent. chlorine should be found in BiOCl.

These results show that the three methods in the British Pharmaceutical Codex give rise to one and the same oxychloride, the constitution of which seems to depend on the fact that the parent bismuth compound must be previously brought into solution.

It is obvious that the commercial sample already referred to cannot have been manufactured by any of these methods, and it became a point of interest to know how far these methods of preparation were being generally followed by bismuth-manufacturers. With this object in view three samples of different manufacture were obtained and analysed with the following results : A contained 13.85 per cent. chlorine, corresponding to the constitution BiOCl. B contained 12.23 per cent., which represents neither BiOCl nor $Bi_{12}O_{13}Cl_{10}$. After washing and drying the percentage of chlorine was found to be 12.13. These figures correspond to a subchloride having the constitution $Bi_{16}O_{17}Cl_{11}$, which by theory contains 12.10 per cent. chlorine. Sample C gave 12.11 per cent. of chlorine, but on washing with cold distilled water the chlorine figure was reduced to 11.71, revealing the presence of soluble chloride, and on converting the washed and dried sample into oxide 91.0 per cent. Bi_2O_3 was obtained. The washed product therefore corresponded to $Bi_{12}O_{13}Cl_{10}$, which would yield 91.05 per cent. Bi_2O_3.

Sample B was probably prepared by boiling together solution of sodium chloride and bismuth subnitrate possessing the constitution $8Bi_2O_3 7N_2O_5, 9\frac{1}{2}H_2O$, corresponding to 16.29 per cent. N_2O_5. Such a constitution would be decidedly abnormal, as the author has previously demonstrated that the N_2O_5 figure, in ten commercial samples representing seven different manufacturers, never exceeds 15.81 per cent. Admitting such an assumption, then, from a knowledge of the constitution of any sample of bismuth subchloride, the process of preparation employed can be ascribed with some degree of certainty to one of two general methods :

If BiOCl represents the constitution, then the product has in all probability been obtained by one of the modifications given in the British Pharmaceutical Codex, in which the parent bismuth compound is previously brought into solution. On the other hand, if the oxychloride has been prepared by boiling bismuth subnitrate with solution of sodium chloride, its constitution will be in general $Bi_{12}O_{13}Cl_{10}$, although it will always be a fraction of that of the subnitrate used.

The work was done in the laboratory of Messrs. Howards & Sons, Ltd.

DISCUSSION.

Mr. FINNEMORE referred to the use of bismuth salts in x-ray diagnosis. In constipation research bismuth is given in 2-oz. doses, and the course of the salt through the body watched under x-rays. The subnitrate has been found in these cases to cause nitric-acid poisoning, and the carbonate gives off carbonic-acid gas. At Guy's Hospital something like half a cwt. of bismuth subchloride was used in this way during the past year. Care must be taken to see that the salt is free from arsenic. The powder is mixed with porridge and taken for breakfast.

Mr. GAMBLE asked whether Mr. Finnemore had noticed any variation in the opacity of samples of bismuth. Upon what does the opacity depend?

Mr. WOOLCOCK questioned whether the bad effects of bismuth subnitrate were due to the nitric acid. He thought it would probably be due to the arsenic which exists in larger quantity than in the subcarbonate. The last named does not give off an unpleasant amount of carbonic-acid gas.

Mr. STEPHENSON had seen it stated that the poisoning was due to the bismuth atom. Thorium salts have been suggested for use in place of bismuth

Mr. FINNEMORE, referring to a sample of bismuth salt which Mr. Gamble had found free from opacity, doubted the identity of the salt. The opacity accompanies the high atomic weight. He still inclined to the view that it was nitric-acid poisoning that took place when large amounts of bismuth subnitrate are ingested. Bismuth is a poison, but difficult to get into the blood.

The author having been thanked, the next paper taken was

Note on Bartsia Odontites.

By H. FINNEMORE, B.Sc., and G. E. TOWN.

Bartsia Odontites is a very common wayside plant of the N.O. *Scrophulariaceæ*, and although no toxic activity has been ascribed to it, it is well known to be avoided by cattle. Bearing in mind the haphazard methods in which our knowledge of the use of medicinal plants has emerged, and also the fact that plants botanically related often contain similar chemical constituents, it occurred to the authors that this relative of digitalis might possibly be worthy of pharmacological and even of chemical study.

Fourteen pounds of the whole plant was collected when in flower, dried in the sun, and completely extracted with hot alcohol in a continuous extraction apparatus. The alcoholic solution was concentrated, and a sample of the product submitted to Dr. P. P. Laidlaw, who tested its action on frogs. He found that it had no poisonous or digitalis-like effect. On allowing the alcoholic solution, made as described above, to stand for twenty-four hours, a fairly large amount of crystalline matter separated in a nearly pure condition. These crystals were purified, and proved to be mannitol. They were identified by their composition and melting-point and by their acetyl derivative.

DISCUSSION.

Mr. POLLARD said such papers as this were the tit-bits that made life interesting. They would see plenty of the herb at Newchurch on Thursday. It was a somewhat far-fetched idea that plants of the same N.O. had similar properties.

The last paper taken was

White Precipitate and the Analysis of White Precipitate Ointment.

By G. D. ELSDON, B.Sc.

SOME years ago attention was drawn to the B.P. requirements for white precipitate, and to the fact that it is practically impossible, under commercial conditions, to prepare a compound of good colour which would answer to them. The question of the estimation of mercury in this and other compounds was also raised.

The author discussed the lime, sulphide, and hypophosphorous acid methods for the estimation of mercury. He prefers the sulphide method, which he finds to be accurate and easily managed. He tested the accuracy with samples of mercuric chloride, and then applied it to the assay of white precipitate. The latter salt, he remarked, has ranged somewhat higher in mercurial percentage than formerly. The range on twelve commercial samples was from 77.02 to 78.49 per cent. of mercury.

In regard to the analysis of white precipitate ointment the chief difficulty is in the separation of the inorganic material from the fatty basis. The following is the author's analytical process :

About 2 grams of the well-mixed ointment is weighed out into an ordinary glass funnel (about 3-c.m. diameter) having its stem cut off to about 1 cm. long. The funnel is then placed in the neck of a small separator (about 70-c.c. capacity) having a very short stem. The whole is then supported in a thick glass beaker and placed in the steam-oven, where in a short time the ointment melts and runs through into the separator. The ointment remaining in the funnel is then washed into the separator with 20 c.c. boiling roughly normal HCl, 10 c.c. boiling petrol, and 10 c.c. more of roughly normal HCl in succession, the stopper inserted, and the whole well shaken. On standing, separation is almost immediate, the white precipitate dissolving in the HCl and the paraffin in the upper layer of petrol. The lower layer is then carefully drawn off and the stem of the separator washed with water, the washings being added to the separated liquid. The petrol solution is then washed in the separator with a further 20 c.c. of boiling roughly normal HCl—which may be poured through the funnel if the previous treatments have not removed all the ointment from it; this is separated and added to the previous extract. Practically the whole of the mercury can be removed in the first separation if care be taken, but a further washing is desirable. In case of doubt a third washing should be made and tested for mercury separately. The mixed extracts are then cooled and filtered from particles of fat, the filter being washed well with water and the washings added to the filtrate, diluted to about 400 c.c., and H_2S gas passed to saturation. The precipitated HgS is then estimated by means of the Gooch crucible in the ordinary way. In calculating the NH_2HgCl from the HgS it is advisable to take NH_2HgCl as containing 77 per cent. of mercury in order to allow for the variability of commercial samples.

As a rapid distinguishing test for the ointment-base used, treatment with concentrated sulphuric acid has proved most successful. About 5 grams of the ointment is placed in a small beaker (40 c.c.), about 20 c.c. of strong sulphuric acid poured on, and the whole gently warmed by putting on the top of the water-oven. In the case of all bases, with the exception of white-paraffin ointment, charring takes place at once, while in this case no immediate charring takes place, and very little on warming. The use of carelessly purified soft paraffin also becomes evident, as much more charring takes place with yellow soft paraffin than with white paraffin. On cooling, these differences become even more marked. In the case of ointment made with a paraffin-base a cake is found on the top; almost white for white-paraffin ointment, brown to black for yellow-paraffin ointment, while in the case of ointment made with other bases no such cake is found.

The author gave a table of results obtained with samples taken in Birmingham, and expressed his thanks to Mr. J. F. Liverseege for criticism and advice during the investigation.

There was no discussion.

Two papers by Mr. Grier which were on the agenda had not been received, so that the session of the Scientific Section concluded at 12.30, giving the members plenty of time to prepare for the luncheon at 1.30 at the Queen's Hotel.

Thursday's Session.

The closing session of the Conference was held on Thursday morning at the Esplanade Hotel, and it is referred to in the Coloured Supplement. The following is the list of officers for the ensuing year:

President.—Sir Edward Evans.

Vice-Presidents.—C. B. Allen, J. P. Gilmour, Sir W. J. Baxter, Professor H. G. Greenish, Edmund White, J. Laidlaw Ewing.

Hon. Treasurer.—J. C. Umney.

Committee.—F. W. Branson, E. F. Harrison, H. Wippell Gadd, D. Lloyd Howard, F. W. Gamble, R. R. Bennett, C. A. Hill, Peter Boa, J Rutherford Hill.

General Hon. Secretaries.—E. Saville Peck, H. Finnemore.

Hon. Local Secretary.—Thos. Stephenson.

Auditors.—J Bourdas, R. A. Robinson.

Social Events of the Conference.

Those who arrived for the week-end had a delightful trip arranged for them on the Sunday. Nine pharmacists went to Shanklin, in the Isle of Wight, leaving the Clarence Pier, Southsea, at about 3 o'clock, and reaching Shanklin at about 4.30. Tea was taken on the terrace of the Chine Hotel, and then followed a ramble in the Chine and the ascent of the headland, from whence could be seen a large stretch of gorse on fire. Then down innumerable steps the party reached the beach, and from the pier the steamer conveyed the party back to Southsea, which was reached at about 8 P.M. Mr. T. O. Barlow and Mr. W. A. Bell acted as guides to the party, and the photograph shown here is a memento which was secured by Mr. J. Cleworth, who was one of the party.

A Group of Chemists who Visited the Garden Isle on Sunday.

Top (left to right): Mr. J. H. Bishop (Tunbridge Wells), Mr. E. H. Church (Cambridge), Mr. H. F. Cook (Cambridge).
Front Row: Mr. A. E. Hobbs (Tunbridge Wells), Mr. W. A. Bell (Portsmouth), Mr. T. O. Barlow (Portsmouth), Mr. J. Dolbear (Oxford), Mr. T. J. Mallet (Cambridge).

* * * *

It was interesting to watch the way the organising of the Conference has been managed by the Local Committee. A printed booklet was issued to the committeemen giving definite instructions regarding the meeting of trains, arranging the guests at luncheon, and other mundane but useful matter.

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On Tuesday, after the President's address, the ladies went on a trip round the town, the details of which have been given in The Chemist and Druggist. First the Gun-wharf was visited, and the ladies were delighted with the curiosities in the form of weapons in the museum, and wonder was expressed at the enormous quantity of arms that were in store.

Outside the Parish Church, Portsmouth, which the Ladies Visited on Tuesday.

The parish church of St. Thomas à Becket was next visited, and then the Royal Garrison Church. The object which excited most interest at the latter was the Book of Common Prayer which has been presented to the church by King George V. It is the custom for the reigning monarch to present this book to his only Royal Garrison Church. On Tuesday afternoon the ladies went to the dockyards, and although at first they met with a discomforting reception, they seem to have melted the stony official hearts and have been enabled to visit the Royal yacht *Alexandra*, a treat which was much enjoyed.

* * * *

The luncheons were held each day at the Queen's Hotel, the official headquarters. Tea was taken on Tuesday at the Cadena Café, Osborne Road, and on Wednesday at the Town Hall.

* * * *

Some curious stories were afloat about certain members who arrived back at their hotels in the small hours of the morning. The bell of the hotel refused to summon the porter, and the problem was solved by a climb through the window, fortunately without the complication of being mistaken for burglars.

* * * *

On Tuesday evening the members of the Conference and their friends to the number of about 200 dined in the Town Hall. Mr. T. A. White (Portsmouth) presided, and the chairmen of the tables were as follows: Messrs. S. Arnold, W. R. Atterbury, T. O. Barlow, P. P. Davies, G. Donaldson, T. Postlethwaite, J. W. Rhodes, S. Rogers, G. H. Smith, A. B. Sparrow, R. Trist, and P. G. Tremlett. Mr. White was accompanied to the platform by Mr. W. F. Wells (President), the Rev. C. G. Garbett, M.A., the Mayor of Portsmouth, Dr. A. Mearns Fraser, Mr. R. A. Robinson, and various ex-Presidents of the Conference and members of the Executive Committee. The hall was beautifully decorated, the orchestra being a mass of foliage, while the table decorations consisted of carnations and gypsophylla. The dinner was quite elaborate for such an occasion, and was well served, the pleasure of the diners being enhanced by a choice programme of music on the historic organ of which Portsmouth is justly proud. After dinner the loyal toast was proposed by the Chairman and duly acknowledged, and thereafter Mr. R. A. Robinson, J.P., D.L., proposed "The Borough of Portsmouth" coupled with the name of the Mayor. Mr. Robinson spoke of the splendid reception which the Conference had received the previous evening from the Mayor in the name of the borough. Portsmouth was no less worthy of their esteem than the great city of London itself, for in its own sphere it was even more important than London. Speaking of the creation of new peers which was spoken about, he thought there was no reason why they might not some day see Portsmouth represented in the House of Lords by the worthy Mayor. (Laughter and applause.) In his reply, Mr. Foster assured the Conference of the great pleasure he had had in accepting their invitation to dine with them. He appreciated all that had been said about Portsmouth and himself, and with reference to the question of the House of Lords, he would have no objection to go there if the pay were good enough; if not, he would be quite glad to pass on the honour to someone else. (Laughter and applause.) He had had many years' experience of public life in Portsmouth, and he recalled the different feeling that used to actuate the public in those early days. Conditions had greatly changed since the time when the inhabitants declined to pay for anything except the ordinary necessities of municipal service. It was quite different to-day, for their constituents were constantly urging them to spend money in entertaining, and therefore he was only expressing the public voice in welcoming the Conference to the borough. (Applause.) Other toasts followed, Dr. A. Mearns Fraser proposing "The British Pharmaceutical Conference," to which Mr. Wells replied. In the course of his remarks Dr. Fraser made pointed reference to the excellent relations subsisting between the medical profession and pharmacists in Portsmouth. Mr. Wells, in his reply, made special reference to the great honour conferred upon him, and more than anything else he appreciated the presence of Mr. Atkins, who had come specially out of compliment to him. "The Visitors" was proposed by Mr. T. A. White, and replied to by some half-dozen local speakers. Mr. W. A. H. Naylor proposed "The Ladies" in a characteristic speech, and Miss Elsie Hooper replied. The speeches were interlarded by an excellent programme of music, and Mr. Martin contributed a recitation very delightfully, while a member of the Conference gave a whistling solo, which brought down the house.

Who were There.

The following list of names of visitors to the Conference includes all those who signed the attendance-book :

Allen, C. T., London
Arnaud, F. W. F., Portsmouth
Arnold, S., Portsmouth
Ashton, F. W., Croydon
Atkins, S. R., Salisbury
Baker, C. H., Cosham
Barlow, T. O., Southsea
Baxter, Sir W., Coleraine
Bayne, Thomas, Edinburgh
Beddow, L., Portsmouth
Bell, W. A., Southsea
Bennett, R. R., London
Bishop, J. H., Tunbridge Wells
Blair, R., Cork
Boorne, H. E., Bristol
Bourdas, I., London
Bown, W. H., Portsmouth
Brewis, E. T., London
Brewis, T., Southsea
Brown, G., Croydon
Browne, W., London
Buchanan, M. E. (Miss), London
Burbank, A. (Miss), Oxford
Cheetham, P., London
Church, E. H., Cambridge
Clarke, R. F., Gravesend
Clayton, C., Oxford
Cleworth, J., Manchester
Cripps, R. A., Hove
Cross, W. G., Shrewsbury
Crossley-Holland, F. W., London
Cruse, T. H., Southsea
Cuff, J. H., Dover
Daniels, M., London
Davies, P. P.
Deane, H., Long Melford
Dolbear, J., Oxford
Donaldson, G., Portsmouth
Dott, D. B., Edinburgh
Dunn, W. R., Oakengates
Farr, E. H., Uckfield
Fellows, W. T., Portsmouth
Finnemore, H., London
Foggan, G., Bedlington
Gadd, H. Wippell, Exeter
Gamble, F. W., London
Gorfett, W. T.
Gresswell, A., Portsmouth
Harrison, E. F., London
Harvey, J. W., Cork
Harrie, H. W., Bournemouth
Hay, W. F., Aberdeen
Hill, C. A., London
Hill, J. R., Edinburgh
Hobbs, A. E., Tunbridge Wells
Hooper, Miss E. S., Portsmouth
Howie, W. L., London
Hughes, W. Griffiths, Manchester
Hunt, C. E., London
Idris, T. H. W., London
Johnstone, C. A., Manchester
Jones, Edmund, Stoke-on-Trent
Kemp, H., Chorlton-cum-Hardy
Kirby, F. B., Bristol
Knott, Herbert, Bolton
Lescher, T. Edward, London
Maben, T., London
Mather, J. H., Godalming
Mayne, Arthur, Cork
Middleton, A., Nottingham
Naylor, Frank, London
Naylor, W. A. H., London
Nicholl, I. W., Belfast
Nimmo, W., Sunderland
Peck, E. S., Cambridge
Pentney, J. C., London
Phillips, Sydney, Wolverhampton
Pollard, E. W., Ryde
Postlethwaite, T., Southsea
Proctor, H. R., London
Ransom, F., Hitchin
Rees, R. P., Dowlais
Rhodes, J. W., Portsmouth
Robinson, R. A., London
Rogers, S.
Saunders, W. H., Liverpool
Sharville, F., Staines
Smith, A. R., London
Smith, E. H.
Sparrow, A. B., Southsea
Stephenson, T., Edinburgh
Tocher, G., London
Tremlett, P. G., Portsmouth
Trist, R., Southsea
Twivey, A., Birmingham
Tyler, A. H., Brighton
Umney, J. C., London
Unsworth, J. W., Altrincham
Unsworth, G. G., Altrincham
Want, W. P., London
Wells, W. F., Dublin
Whigham, R. L., London
White, Edmund, London
White, T. A., Southsea
Widdowson, T. S., London
Wild, J., Manchester
Woolcock, W. J. U., London
Woolley, S. W., London

AGRICULTURAL NOTES.

Spraying Apple-trees.

Bordeaux Mixture is liable to injure the leaves of some varieties of apple-trees so severely that Mr. E. S. Salmon, of the South-Eastern Agricultural College, has conducted a series of experiments with lime-sulphur as a summer wash ("Journ. Board of Agric."). The formula employed is :

Quicklime	50 lb.
Flowers of sulphur	100 lb.
Water	50 gals.

Boil together and adjust the sp. gr. to 1.01.

For use this was diluted with an equal quantity of water. Mr. Salmon found that no injury is caused to the leaves when sprayed with the half-strength lime-sulphur wash, and he expressed the opinion that full-strength wash might possibly be safe to use in May. The wash is only intended to be employed on those trees that are liable to be injured by Bordeaux mixture, as the last-named is the best fungicide known.

Varieties of Lime-Sulphur.

Mr. Salmon, in the course of his paper, refers to a recently published bulletin of the U.S. Department of Agriculture, and quotes the following new modifications of lime-sulphur washes, the novelty being the addition of iron or copper sulphate.

Iron Sulphide Mixture.

Place 8 lb. quicklime in a 50-gal. barrel and pour in 2 or 3 gals. of boiling water. Next add 8 lb. of flowers of sulphur and another bucket of hot water. Stir occasionally to prevent caking. Cover up the barrel to allow the mixture to boil for ten to twenty minutes, when the sulphur will have dissolved. Fill up the barrel to the 40-gal. mark and add a solution of 3 lb. of iron sulphate in 10 gals. of water.

Copper Sulphide Mixture.

This is prepared in like manner, except that copper sulphate 2 lb. is used in place of the iron sulphate.

Canoe Lake, Southsea.

The house on the right of the three in the centre is the residence of the Mayor.

Medicated Gauzes.

Mr. G. M. Beringer, Jun., gives in the "American Journal of Pharmacy" the following processes for the extemporaneous preparation of medicated gauzes. Suitable gauze as regards freedom from resins and fats is now obtainable ready prepared; a satisfactory product contains about twelve threads to the centimetre, both on the woof and on the warp, and is conveniently used in widths of about 90 cm. (1 yard). One metre of this weighs about 25 grams. The tables, floor, and all other possible portions of the room where gauzes are to be prepared should be scrubbed with hot lye solution containing phenol. The top of the work-table should be preferably of glass, but if not, should be thorougly scrubbed and finally washed with a 1-500 solution of mercuric chloride and covered with sheets of sterilised parchment paper before any dressings are placed upon it. The operator should observe strict aseptic precautions regarding his hands and nails, and should cover his hair and clothing with sterile wrappings. Cartons and paper for packing and wrapping should be heated in an oven for half-an-hour at 120°-150° C.

Plain Absorbent Gauze.

Dry.

The gauze should be cut into convenient lengths and rolled or folded into suitable bundles, wrapped in sterilised parchment paper and placed in a steam bath for half an hour. It should then be removed and placed in previously sterilised cartons or wrapped in sterilised tough, heavy paper.

Moist.

The gauze is cut into suitable lengths, then sprinkled with sterilised distilled water containing 5 per cent. of glycerin and packed in sterilised amber glass jars. The filled jars, with the caps loosely placed, should then be resterilised in a steam bath for half an hour, after which they should be immediately sealed.

Iodoform Gauze.

Ten per Cent., Dry.

Iodoform	10 grams
Acetone	100 c.c.
Sterile gauze	100 grams

Dissolve the iodoform in the acetone and pour over the gauze loosely placed in a sterilised jar, or other suitable container, fitted with a close cover. Cover and allow to stand about fifteen minutes or until evenly moistened. Remove from the jar and drive off the acetone by waving in the air. Immediately wrap in sterilised parchment paper. Resterilise in steam bath for fifteen minutes and then enclose in a tight carton, or tough paper wrapper, previously sterilised.

Moist.

Prepare by taking dry iodoform gauze and sprinkling with freshly sterilised distilled water containing 5 per cent. of glycerin (about 75 c.c. will be needed for each 100 grams of gauze). Allow to stand in a covered sterile jar till the moisture is evenly distributed. Pack into sterilised amber glass jars and resterilise, with lids of jars loosely placed, in a steam bath for fifteen minutes. Hermetically seal the jars immediately upon removal from the steriliser.

Thymol Iodide Gauze.

Five per Cent., Dry.

Thymol iodide	5 grams
Chloroform	25 c.c.
Acetone	50 c.c.
Sterile gauze	100 grams

Dissolve the thymol iodide in the chloroform and add the acetone. Prepare as directed for dry iodoform gauze.

Moist.

Dry thymol iodide gauze	100 grams
Water	75 c.c.
Glycerin	5 grams

Prepare as directed for moist iodoform gauze.

Sublimated or Bichloride Gauze.

1 in 1,000, Dry.

Mercuric chloride	0.1 gram
Water	37.5 c.c.
Acetone	37.5 c.c.
Sterile gauze	100 grams

Dissolve the mercuric chloride in the acetone and water and proceed as under dry iodoform gauze, but resterilise for half an hour.

Moist.

Mercuric chloride	0.1 gram
Water	75 c.c.
Glycerin	5 grams
Sterile gauze	100 grams

Dissolve the mercuric chloride in the water and add the glycerin. Proceed as directed for dry iodoform gauze, but pack in sterilised amber glass jars. Place the jar lids loosely, then put the jars into steam bath and resterilise for half an hour. Hermetically seal immediately upon removal from the steriliser.

Phenolated or Carbolised Gauze.

Five per Cent., Dry.

Phenol crystals	5 grams
Acetone	50 c.c.
Water	50 c.c.
Sterile gauze	100 grams

Mix the acetone and the water, add the phenol, and proceed as for dry iodoform gauze.

Moist.

Phenol crystals	5 grams
Acetone	50 c.c.
Water	50 c.c.
Glycerin	5 grams
Sterile gauze	100 grams

Mix the acetone, water, and glycerin and dissolve the phenol in the mixture. Proceed as for dry iodoform gauze, but pack upon removal from impregnating jar into sterilised amber glass jars and resterilise in a steam bath for half an hour with the lids of the jars loosely placed.

Borated Gauze.

Ten per Cent., Dry.

Boric acid	10 grams
Water	100 c.c.
Sterile gauze	100 grams

Dissolve the boric acid in the water by heat and proceed as for dry iodoform gauze, excepting that the material should be kept at the temperature of boiling water until the moisture is evenly distributed, and then pack without further drying. Resterilise for half an hour.

Moist.

Boric acid	10 grams
Glycerin	5 grams
Water	100 c.c.
Sterile gauze	100 grams

Dissolve the boric acid in the glycerin and water by the aid of heat. Proceed as above, but pack in jars and finish as under iodoform gauze, excepting that resterilisation should be continued for half an hour.

Picric Acid Gauze.

Two per Cent., Dry.

Picric acid	2 grams
Water	50 c.c.
Acetone	50 c.c.
Sterile gauze	100 grams

Dissolve the picric acid in the acetone and water, and proceed as under dry iodoform gauze.

Moist.

Picric acid	2 grams
Glycerin	5 grams
Water	50 c.c.
Acetone	50 c.c.
Sterile gauze	100 grams

Dissolve the picric acid in the glycerin, water, and acetone, and proceed as for moist phenolated gauze.

All gauzes for medication should be sterilised just before being used. This should be preferably, by dry heat at a temperature of 120°-150° C., for half-an-hour. In working out these formulas the percentage of medicament is based in each case upon the amount *added* to 100 parts of dry gauze.

Copper Sulphate in France.—The British Consul at Bordeaux estimates the requirements throughout France at nearly 50,000 tons per annum. The imports into Bordeaux in 1910 amounted to 7,066 tons, all from the United Kingdom, being a decrease of 1,154 tons as compared with 1909. The consumption last year was much greater than in 1908 and 1909, but owing to the increased production of French makers, including that of the Cornubia Works at Bordeaux, imports from the United Kingdom were still further reduced. Low prices prevailed, one of the principal contributory causes being the sudden and unexpected reduction of the French import-duty from 3f. to 1f. 50c., the new tariff coming into force on April 1.

Dispensing in Continental Countries.

In one point the National Insurance Scheme will closely resemble existing Continental measures of the same nature—viz., in the mode of administering the benefits. In Great Britain this is to be entrusted primarily to the existing voluntary organisations, while for the same purpose in Germany and elsewhere self-governing sick-clubs had to be created, mostly of a purely local character. This important point of resemblance is not without interest to the British pharmacist (writes our German correspondent), for it provides him with an opportunity to profit by the experiences gained by his foreign colleagues in their dealings with the administrators of the provisions of this class of legislation, and thus when called to participate in the working of the scheme he will be prepared to meet certain demands which appear to be an inherent feature of all sick-club organisations the world over.

The great aim of these organisations appears to be keeping the expenditure on medical assistance and medicines down to the very lowest level in order to employ the money saved on these items in other directions, especially for extending the benefits also to the non-insured dependents of the members. Unfortunately, the realisation of this aim is accompanied by the adoption of a distinctly hostile attitude towards the pharmacist, who only too often has to bear the totally unjustified stigma of exhibiting a desire to profit by the misfortunes of others—and this in countries where his charges are regulated by the authorities without his co-operation. The art of cheap prescribing has indeed been made the subject of a scientific study by the clubs, with the result that

Restrictions are Imposed on the Prescriber.

These have assumed formidable dimensions, and in many cases the club doctors are provided with books of instructions containing a respectable number of paragraphs usually of the "don't" kind. The bases of the German medicine-tariff, according to which all prescriptions have to be charged, were given in The Chemist and Druggist of May 20, index folio 731, and many of these restrictions aim at utilising to the utmost the various charges. In the first place we have the question of containers, which are charged for according to their actual capacity and not according to the size which may have to be used. For example, the doctor is enjoined to prescribe "ad" a stated amount in order to avoid the charge for a possible next size; thus if he prescribes pot. iodid. 10 grams, water ad 100 grams, only 1¼*d.* is charged for the bottle, whereas were he to write: pot. iodid. 10 grams, water 100 grams, the charge would be 2*d.*, although only a 100-gram bottle were used. This, however, also works against the pharmacist, for in prescribing 100 grams of ether, a larger bottle than 100-c.c. must be used, but only the 100-c.c. size may be charged for. Another injunction is to avoid prescribing expensive forms of medicines, such as infusions, cachets, emulsions, in order to save the charge for the manipulations. This even goes so far that the doctors are required to avoid prescribing single solutions—*e.g.*, they are to prescribe 20 grams of pot. iodid. and instruct the patient to dissolve it in a wine-bottle full of water and take a glassful as a dose; this implies a saving of at least 5¾*d.* Another point is to avoid the use of divided powders: instead of prescribing ten powders each containing, say, 0.5 gram of sod. salicyl., he is to prescribe 5 grams of sod. salicyl., with directions to "take as much as will go on the point of a knife." It is evident that in certain cases such a course may present grave dangers to the patient, and this has been recognised in Hungary, where it is forbidden to prescribe potent drugs in this loose form.

The Use of Synthetic Remedies

has gained a prominence in German and Continental therapeutics which is scarcely appreciated in Great Britain, and here the question of the substitute *versus* the protected preparation naturally plays a great *rôle*; in fact, it has become one of the most vexed questions in the relations between sick-clubs, pharmacists, and manufacturers. The clubs demand that the substitute should be prescribed, but even when the doctor is willing to adopt this course, the unwieldy chemical designations offer a stumbling-block to the busy practitioner. Recently the clubs in Wurtemberg adopted a singular measure to overcome this difficulty—they made arrangements with a number of doctors and pharmacists for the former to make use of the protected name and with the latter to dispense the substitute. The question immediately arose, Who should bear the consequences of proceedings for infringing the trade-mark laws? Another favourite form of economy is to avoid the use of certain "expensive" drugs in prescriptions, especially for external use, and to employ cheaper substitutes—for instance, rape-seed oil instead of olive oil in liniments, tinctures instead of infusions, the use of raspberry-syrup and simple syrups to the exclusion of the others, etc. This style of cheap prescribing has been reduced to a fine art, and a regular collection of special formulæ are supplied to the doctors embodying this principle. Naturally this has not been without effect on prescribing for paying patients, and it may be said that Continental prescribing, with the exception of France, is simpler than is the case in England, where on an average more skill is often required in compounding.

Restrictions on the Pharmacist

are also imposed by the sick-clubs. They refer principally to the use of cheap containers, and of paper bags in the place of cardboard boxes for powders, while empty containers have to be taken back and the amount credited to the club. Although it is stipulated that these shall be returned in a "clean condition," this provision has many serious drawbacks, and is by no means relished. In several States the pharmacist has to grant a fixed rebate on all sick-club prescriptions, usually 15 per cent., and has often to wait some time for payment of his bill. A more just system has been introduced in Italy, where the rebate depends upon the amount of the bill; thus if the latter is below 40*l.*, 15 per cent. is deducted; 40*l.* to 200*l.*, 20 per cent.; 200*l.* to 400*l.*, 25 per cent.; and if over 400*l.*, 30 per cent. must be deducted, the annual total being the basis of calculation. Fierce battles have raged and still rage in Germany around the subject of "counter-sales"—that is to say, the charge for prescriptions calling for simple remedies which are freely sold over the counter. To take a case in point, 10 grams of boric-acid ointment is retailed in a chip or tin box for 1¼*d.* (10 pfennigs), but the prescription-charge for this amount would be 5*d.*, and after deducting 15 per cent. would still be 4¼*d.* This question has been solved by establishing a list of articles coming under this heading, which are charged for by agreement—a form now made compulsory in the new insurance laws. Another point not without interest is that the manufacturers of many packed specialities, such as tonics, issue a special form of cheaper package for club dispensing, and naturally the ordinary public in time get to notice the difference and also demand the less elegant package.

The supply of surgical dressings is also slowly passing from the pharmacists into the hands of the sick-clubs themselves, and to conclude I give the prices in force for a few of these articles:

Cotton-wool: 50 grams, 3*d.*; 100 grams, 5½*d.*; 250 grams, 11¼*d.*

Gauze bandages, 5 metres in length: 6 cm. broad, 2*d.*; 8 cm., 2½*d.*

Plaster bandages, 5 metres long: 6 cm. broad, 5½*d.*; 8 cm., 6*d.*

Corrosive-sublimate gauze: 1 metre, 5½*d.*; 2 metres, 10*d.*

Iodoform gauze, 10 per cent.: 1 metre, 9½*d.*; 2 metres, 1*s.* 5½*d.*

Guttapercha sheeting, 45 cm. broad: ½ metre, 10*d.*

Boric lint, 35 cm. broad: 50 cm., 6*d.*

Mexican Chicle Gum.—The exports of chicle (the chief constituent of chewing-gum) from Vera Cruz, Mexico, during the fiscal year 1909-10 amounted to 384 tons, valued at 58,498*l.*, against 828 tons, valued at 86,843*l.*, in 1908-9, and 748 tons, valued at 80,915*l.*, in 1907-8.

The yield of revenue from the "chemists' specifics tax" in the Argentine Republic during 1909 amounted to 600,000 dol. (paper), against 795,700 in 1908 and 835,360 in 1907. In a summary of the Argentine Budget for 1911 the revenue from "tax on perfumes, chemists' specifics, etc." is placed at 124,000*l.*

TRADE REPORT.

The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers receive the goods into stock, after which much expense may be incurred in garbling and the like. Qualities of chemicals, drugs, oils, and many other commodities vary greatly, and higher prices than those here quoted are charged for selected qualities of natural products even in bulk quantities. Retail buyers cannot, therefore, for these and other reasons, expect to purchase at the prices quoted here.

42 Cannon Street, London, E.C., July 26.

As this section of our Trade Report closed for press on Wednesday evening, a full report of the drug-auctions and Thursday's market intelligence will be found in our Coloured Supplement. Meanwhile trading has continued under quiet conditions with comparatively few changes in value. Opium remains a very firm market, but both sellers and buyers hold aloof. Citric acid is in good request, and the makers have difficulty in coping with the demand. Tartaric acid is very steady, and any alteration will be upwards. American peppermint oil is strong and the subject of continued "bullish" advices from the other side. Essential oil of almonds is 2*s.* per lb. dearer. Canary-seed and gentian are firmer. Copper sulphate and foreign saltpetre are easier, and caraway-seed lower. Quicksilver is unaltered. The chief alterations are as under :

Higher	Firmer	Easier	Lower
Almond oil ess. and persic ess. Lemon oil	Canary-seed Cod-liver oil Gentian	Copper sulphate Saltpetre	Caraway-seed

London Markets.

Agar-agar is quiet, but steady at from 1*s.* 8½*d.* to 1*s.* 9*d.* per lb. for Kobe No. 1 strip as to quantity.

Almond Oil.—English essential oil of almonds free from hydrocyanic acid has been advanced 2*s.* per lb. to 22*s.*, and a similar advance has been made in bitter-almond oil distilled from peach or apricot kernels, the price of which is 19*s.* per lb. for s.a.p.

Aloes.—The exports from Cape Colony during May amounted to 20,638 lb., valued at 207*l.*, against 96,790 lb., valued at 944*l.* in 1910 ; the five months' exports amounted to 290,883 lb. (2,879*l.*), against 374,137 lb. (3,747*l.*) in the corresponding period of 1910.

Balsam Tolu remains in a strong position, and for shipment from the Continent, in at least five-case lots, 1*s.* 4½*d.* to 1*s.* 5*d.* per lb. c.i.f. is quoted.

Belladonna-root is offered at 38*s.* 6*d.* per cwt. c.i.f. for shipment from the Continent, and on the spot 39*s.* is quoted.

Buchu.—The exports from the Cape Province during May amounted to 37,998 lb. (5,095*l.*), against 31,201 lb. (3,483*l.*) during May 1910. The exports during the five months ending May 31, 1911, amounted to 114,932 lb. (16,190*l.*), against 177,845 lb. (14,621*l.*) during the corresponding period of 1910. The *Edinburgh Castle* has brought 16 packages this week.

Camphor (Refined) remains quiet with sellers of Japanese 2½-lb. slabs at 1*s.* 6½*d.* c.i.f. for August-September shipment.

Camphor Oil.—White light Japanese in cases is quoted 45*s.* per cwt. on the spot.

Canary-seed is firmer owing to higher prices being required for shipment from the producing countries. Turkish is now quoted 43*s.* to 44*s.* per quarter on the spot, and Morocco 42*s.* to 45*s.* for ordinary to good.

Cantharides.—The new crop of Russian flies is offered at 2*s.* 10*d.* per lb. c.i.f. for at least 2-cwt. lots.

Caraway-seed is lower at 21*s.* to 22*s.* per cwt. for ordinary to fair Dutch on the spot.

Cascara Sagrada.—Privately new is offered at 40*s.* and three-year-old at 41*s.* per cwt. Business has been done at these figures on the spot, and in New York the equivalent of 44*s.* is said to have been paid.

Citric Acid is in good demand, so much so that makers are behindhand with deliveries. English is quoted at 1*s.* 3¾*d.* and foreign at 1*s.* 3½*d.* per lb.

Citronella Oil.—Further business has been done in Ceylon description at 11*d.* per lb. c.i.f. for August-September shipment, with sellers of August-October at 11⅛*d.* c.i.f.

Cloves.—At auction 22 cases Penang sold without reserve at 10*d.* to 10½*d.* for good ; five were bought in at 1*s.* 1*d.* Privately Zanzibar are quoted at 7⅛*d.* spot, and there are buyers of August-October at $6\frac{1}{16}$*d.* to arrive.

Coca-leaves.—Fair arrivals on the Continent have enabled holders to reduce their prices, and for at least 5-cwt. lots, 9¾*d.* per lb. c.i.f. is quoted.

Cod-liver Oil.—Several agents report rather more inquiry, especially from consumers, for small spot parcels at steady to firmer rates ; good brands on the spot are obtainable at from 109*s.* to 110*s.* per barrel, and at from 108*s.* to 110*s.* on c.i.f. terms for September shipment.

Copper Sulphate is 2*s.* 6*d.* per ton easier at 19*l.* 7*s.* 6*d.* for ordinary Liverpool brands for prompt delivery, and 19*l.* 10*s.* to 19*l.* 15*s.* for January-April.

Coriander-seed is steady at 16*s.* per cwt. for good Morocco, and 16*s.* 6*d.* for Russian.

Elemi.—From Hamburg, white to prime white is offered at from 51*s.* to 53*s.* 6*d.* and seconds at 48*s.* 6*d.* per cwt. c.i.f. in at least five-case lots.

Ergot.—The previous high price of 5*s.* per lb. is maintained, but there are practically no buyers at present rates, and those who defer purchases for, say, two months will probably be able to buy at a lower level.

Gentian.—Business has been down at 22*s.* 6*d.* spot, but 23*s.* is now asked. The new collection is reported to be short and backward.

Guinea Grains are unaltered with offers of half-ton lots at 97*s.* 6*d.* per cwt. c.i.f. terms, and on the spot 105*s.* is quoted.

Hydrastis.—The spot supply is exhausted.

Lemon-juice.—Holders of English raw are asking 1*s.* 8*d.* per gal.

Lemon-oil remains in good demand, and for pure quality up to 6*s.* 2*d.* spot has been paid ; for shipment 6*s.* c.i.f. is quoted.

Lime-juice.—Raw West Indian is now very scarce on the spot, with buyers at 1*s.* 9*d.* ; for refined 2*s.* per gal. has been paid.

Linseed is very firm at 69*s.* to 70*s.* per quarter for Morocco.

Lycopodium.—Russian is offered at 2*s.* 1½*d.* per lb. net for treble-sifted quality.

Menthol remains firm at 16*s.* 9*d.* per lb. on the spot, at which small sales have been made ; for August-September shipment 15*s.* 7*d.* c.i.f. is quoted for Suzuki and 5*s.* 10½*d.* c.i.f. for oil.

Morphine.—Makers remain firm, and for large contract quantities they quote 9*s.* 6*d.* per oz. for hydrochlor. powder.

Opium.—The market remains very firm and there are practically no sellers of either Turkey or Persian opium on the spot—probably 25*s.* would have to be paid for good Turkey druggists' to-day ; on c.i.f. terms 11½ to 11¾ per cent. is quoted 22*s.* from Smyrna.

Writing on July 14, a Smyrna advice states : "We have no business to report, with the exception of two cases fine selected slightly new opium for the Continent at 19*s.* 6*d.* A buyer came forward for extra-selected old Karahissar at 19*s.* 6*d.*, but sellers will not make any concession under 22*s.* The arrivals to date amount to 182 cases, against 818 at same date last year."

The Teheran correspondent of "The Standard" wires on July 25 that the situation at Shiraz has grown worse, and the Governor has had to call to his aid the turbulent Kushgai tribesmen, who have now arrived, having looted all the villages *en route*. [Shiraz is well within the sphere of British influence and an important opium centre. The disturbances will no doubt delay the shipment of new-crop opium to the coast, and if so the effect will be felt on prices in the autumn.—ED.]

OTTO OF ROSE.—No prices for the new otto have yet been "fixed" and the outlook continues uncertain in view of the confliction of opinion prevailing in Bulgaria. Mr. Ch. Christoff, of Kazanlik (per his agents, Messrs. P. Samuelson & Co.), has issued a circular, in which he gives the estimated production of otto of rose (1911 crop) from each village. The total is 2,581.750 kilos., as compared with 2,560.5 kilos. during 1911. This is divided among the following cantons, the figures representing kilos: Kazanlik, 819; Nova-Zagora, 98.750; Stara-Zagora, 174; Tchirpan, 176.500; Philippopoli, 277; Pechtera, 52; Panagurichté, 45; Karlovo, 939.500.

PEPPERMINT-OIL.—Advices, it will be seen from another paragraph, remain very bullish, and several of the leading brands of American tin oil are now quoted 12*s.* 6*d.*, and one agent has been instructed to withdraw his quotation. H.G.H. is quoted 15*s.* London terms.

QUICKSILVER.—Firsts is unaltered at 9*l.* and second-hands at 8*l.* 17*s.* 6*d.* per bottle.

QUILLAIA is firm at 26*l.* per ton ex store Liverpool and 24*l.* 15*s.* on c.i.f. terms. For shipment from the Continent 30*l.* per cwt. c.i.f. is quoted in quantity, and on the spot there are offers at 28*l.*

QUININE continues steady, the second-hand quotation for best German sulphate in bulk being 7*d.*, Amsterdam 7*d.*, and Java 6½*d.* per oz.

SALTPETRE.—Since the reduction of June last a further fall has taken place, to which we refer in our Coloured Supplement.

SENEGA.—With a limited quantity offering, sellers ask 2*s.* 4*d.* net on the spot, and for shipment 2*s.* 3½*d.* would be submitted by dealers. There is a fair number of inquiries. New York advices report continued light receipts, with fears expressed of a shortage.

SOY.—Wochan brand is selling at 1*s.* 4*d.* per gal., and other brands at 1*s.* 3½*d.* ex wharf.

SULPHUR.—In Liverpool refined is quoted at 5*l.* 17*s.* 6*d.* for roll and 5*l.* 15*s.* per ton for flowers on c. and f. terms.

TARTARIC ACID is very steady at 1*s.* 1¾*d.* for English and 1*s.* 3½*d.* for foreign.

TURPENTINE OIL is practically unaltered on the week, closing dull at 38*s.* to 38*s.* 3*d.* spot.

Otto of Rose.

In "The Perfumery and Essential Oil Record" for July the Editor (Mr. John C. Umney, F.C.S.) says: "It will be recalled that the early stages of the rose cultivation last year gave indications of a fine yield, which ultimately proved disappointing. In our opinion it was the good prospect and poor result which led to the market battle between those who optimistically sold on the hopeful promises and 'hedged' on the poor output. Recommendation to utilise synthetic rose-products—at first temporarily—has resulted in such perfection in these bodies that they have come to stay, creating such a demand as is likely to make its influence felt in the world's requirements for Bulgarian otto of rose. There is also to be considered the poor French crop of rose-products this year, which naturally must have some influence on the position. Reports of the probable outturn in Bulgaria this year are not without confliction. The majority of opinions, however, that have been supplied us indicate at least no higher yield than last year, and therefore it is probable that dearer rather than lower prices will rule for the new season's oil, the more especially as unquestionably many large users only bought for their bare requirements last season. It is a pity that so much economic uncertainty should habitually surround so important a perfumery product, for the doubts which arise each season must of necessity check use and annoy purchasers."

American Peppermint Oil.

Under date of July 11, Messrs. McKesson & Robbins write to their London agent (Mr. C. F. Gerhardt) as follows: "The distillation is now in progress; the market is quiet, but steady. Later reports from the country are that the development of plants has not been as favourable as we expected earlier, and it is doubted whether the new crop will be a normal one. Excessive temperatures have caused some damage to the second crop by causing the leaves to drop from the plants before they had developed sufficiently, and several distillers began to use these plants to prevent further loss. The yield from plants cut now is small. In general the plant is quite small for this time of the year, and if the hot weather continues the prospects are for a small crop. Although higher prices are now being offered from the dealers, the growers are not anxious to make contracts, as they believe they will be able to obtain better prices shortly. On the strength of the various reports we have decided to withdraw from the market for the time being." The firm also inform their agent that they refused an order from a broker for 5,000 lb. on the basis of 11*s.* 4*d.* per lb. c.i.f.

English Medicinal Herb Crops.

Messrs. Stafford Allen & Sons, Ltd., write: "All the crops have suffered from lack of rain, and although that which fell three weeks ago did much good, unless more falls within a few days much damage will be done.

BELLADONNA.—An average crop was obtained from the first cutting. The second crop has made little progress.

CHAMOMILES.—The prospects of this depend entirely on the amount of rain we get in the next week. The plants are healthy, but very small, and unless they get enough rain to enable fresh growth to be made a poor crop will result.

DILL.—The plants are short and coming into bloom prematurely, so that with a continuance of drought the seeds will be small and light, resulting in a short crop.

FOXGLOVE.—A fair crop of second-year leaf may be expected. The first-year plants are making no progress.

HEMLOCK.—A light crop.

HENBANE.—The rain three weeks ago enabled a good crop of flowers to be obtained. The first-year plants are suffering severely from lack of rain.

LAVENDER.—Even this warmth-loving plant seems to have suffered by the drought just when the flower-buds were forming, and the amount of flower will be smaller than usual. We may hope for a good quality and a fair yield of oil.

PEPPERMINT.—The plants are healthy and strong, but very short. Rain now would, we believe, give us a fair yield, but if the drought continues it will be very small.

RHUBARB is healthy, but wants rain.

ROSEMARY is looking very well.

VALERIAN.—This is looking well, but little root will be made unless the weather changes."

Messrs. Rivers, Hill & Co., Ltd., write that the lavender crop will be short, due to the acreage having suffered from past wet seasons, but quality of oil should be very fine if weather keeps up.

ROSEMARY.—The plants are well forward and show strong growth; the oil should be exceptionally good.

THYME.—The oil is short in quantity, but of good quality.

Messrs. W. J. Bush & Co., Ltd., write: "We have recently paid a visit of inspection around the district of Mitcham for the purpose of obtaining, if possible, some reliable information as to the present prospects of peppermint and lavender crops. The heat and dry weather have made it very easy for growers to keep the fields clean, and although the sunshine has undoubtedly checked the growth of the plants, the quality of the oil, in our opinion, will be improved, and the yield per still, if not per acre, will probably be increased. In some places the unusual heat and drought are causing the herb to dry up prematurely without flowering, and cutting has been commenced in order to save the crop. Growers would like to see some rain immediately, and if it does not come soon cutting will become general. On the whole we look for very fair results. Lavender would have considerably benefited by some rain in the early part of the season. The acreage is about the same as last year. The demand for flower bunches has considerably increased during the last few years, and consequently rather a small quantity will be reserved for distillation purposes, but much will depend on the prices fetched for bunches and the market price of the oil. The market is very bare of oil, and high prices will certainly have to be paid."

Heavy Chemicals.

Business in the heavy-chemical market is probably a shade quieter, but the tone of the market continues very steady. Some inquiries are coming in for alkali products for next year, but little is being actually concluded.

SULPHATE OF AMMONIA.—This market is very firm, and there is a strong demand both for prompt and forward; even at present premiums for forward sellers are not keen. Present nearest figures: Beckton, prompt, 25-per-cent. ammonia guaranteed, 13*l.* 6*s.* 3*d.*; London terms, 13*l.* 2*s.* 6*d.*; Leith, 13*l.* 16*s.* 3*d.* to 13*l.* 17*s.* 6*d.* prompt, 13*l.* 17*s.* 6*d.* forward; Liverpool, prompt 13*l.* 15*s.*, and forward 13*l.* 17*s.* 6*d.*; Hull, prompt 13*l.* 12*s.* 6*d.*, and forward 13*l.* 15*s.*

Correspondence

Memoranda for Correspondents.

All communications must be accompanied by the names and addresses of the writers, otherwise they cannot be dealt with.

Queries by subscribers on dispensing, legal, and miscellaneous subjects connected with the business are replied to in these columns if they are considered to be of general interest.

Letters submitted for publication (if suitable) should be written on one side of the paper only. Their publication in "The Chemist and Druggist" does not imply Editorial agreement with the opinions expressed.

U.S.P. Digest of Comments.

(*C. & D.*, July 1, index folio 17.)

Sir,—*A propos* of your very kindly notice of Bulletin 75 of this Laboratory, will you allow me to correct two statements? Aside from the regular service mailing list, our mailing list includes a large number of technical journals, both American and foreign, teachers in medical and pharmaceutical schools, and practising pharmacists who have signified their interest in pharmacopœial work. All bulletins of the Hygienic Laboratory may be secured, to the limit of the number published for free distribution, upon application to the Surgeon-General of the Public Health and Marine-Hospital Service, and then, to the limit of the edition, they may be secured at cost, upon application to the Superintendent of Public Documents. The supplemental note, as to the spelling of "sirup," was interpolated by the Government Printing Office, in spite of the earnest protest of the editors of Bulletin 75; all of our manuscripts read "syrup" throughout.

Yours faithfully,
Murray Galt Motter.

Hygienic Laboratory, Public Health and Marine-
Hospital Service, Washington.

A National Association of Retail Chemists.

Sir,—Answering Mr. Harrie's letter in your last week's issue, I certainly believe it possible to unite chemists and form a strong Association on trade-union lines. Everyone admits the need of such a union and the advantages to follow. The most serious obstacle seems to be the deadly apathy of chemists, probably due to pitiable surroundings and lack of social intercourse. Brush away the cobwebs, get at the man himself, get him to talk, and you invariably discover the germ of wonderful possibilities. This germ only needs nurturing and developing. Many chemists have written me stating that all they want is a leader. Such a leader need not be a "Napoleon among chemists," but he should be able to command the confidence of a large number to make a successful start. Knowledge of material is the first essential; he must from personal experience be conversant with the problems and difficulties besetting the retailer, and be prepared to grapple with them. Faith is necessary, faith in chemists as a body, in the cause and in himself, for he will need perseverance, and a steady determination to overcome all obstacles, be prepared to wait patiently, make opportunity and create circumstances; follows a knowledge of organisation methods, experience in handling men and conducting a campaign to an issue.

Men possessing these qualifications are rare in pharmacy as elsewhere; but until someone better qualified is prepared to undertake the task, my services are at the disposal of my brother retailers. No existing Association or group of Associations embraces the whole of the retailer's needs for offence and defence. We purpose forming such, and ask every qualified chemist connected with the retail to lend a hand. Don't expect your neighbour to do your share. In that, and that alone, lies failure. With your help I believe it possible to raise the business of pharmacy to the position it should occupy as a responsible and important branch of the public service.

Recent lessons should convince the most sceptical among us that neither the Government nor the public adequately value our qualification and services. In a Bill directly affecting our livelihood our existence is ignored. This condition of affairs is in a great measure due to our own folly and shortsightedness. Surely the present crisis, showing in its nakedness our helplessness and dependence on the goodwill of outsiders, should be sufficient to arouse even the most apathetic. Members of other trades are astounded when told we have nothing approaching a trade-union in pharmacy. The time has come to "make good" this glaring defect. Sufficient support is already promised to make a start. Details can be arranged later. Meanwhile, will every pharmacist who is prepared to support the movement write to me offering suggestions and help?

L. Moreton Parry.

163 Oakfield Road, Liverpool, July 21.

The National Insurance Bill.

Sir,—I beg the favour of a few lines' space to call attention to a very weak point in our case, especially as concerns individual persons who conduct their businesses themselves as against corporate firms. At the Mass Meeting of chemists recently held, one of the speakers (Mr. R. A. Robinson) hoped in his remarks that there would be "no cutting of prices" under the tariff to be agreed upon under the Bill. I venture to ask what is there in the Bill or in the resolutions drafted for the Pharmaceutical Society to stop "cutting"? At present, if a tariff be arranged anyone might offer a discount off the tariff price, or, *e.g.*, if an 8 oz. mixture, say, be 10*d.*, a cutting firm might offer the local committee a reduction of 2*d.* Upon consideration, our Scotch friends, who desire the tariff prices to be fixed, as it were, impartially by the Commissioners, have a great deal in their favour providing those prices were to be maintained by all. I do not envy any local committee of chemists, or even the local Chemists' Associations, trying to arrange prices to meet all firms and individuals, together with other representatives, perhaps some local members from the medical profession as well. I have written to our Member (Mr. W. S. Glyn-Jones), and in his reply, dated July 24, he says:

> "I have yours of 14th inst., and realise the importance of the point you raise. At present the fight to secure the acceptance by Parliament of our Resolution 1 in 'The Case for Pharmacists' is too keen to permit of much attention being given to other important but subsidiary points."

I do not think chemists will like working to get their case granted and for other opposing forces to step in and get all the benefit. I hope there is time for the directors of the C.D.A. and P.A.T.A. and Pharmaceutical Society Council to add a further clause on the tariff point to stop "cutting."

Yours faithfully,
Brentford, W. A. Hawthorne.

Subscribers' Symposium.

For questions, answers, incidents, and interchange of opinions among "C. & D." readers.

They like the "C. & D."

"I trust all Belfast readers value your journal as I do—I could not possibly do without it now."—(112/9.)

F. T. H. (New Zealand) (111/4) says: "The *Diary* is very valuable, and one must acknowledge that we subscribers receive very good value indeed for our money."

Chorea-drops.

Seeing your report in the *C. & D.*, July 22, index folio 134, *re* chorea-mixture, brings to my mind certain drops put up by a man in the year 1879 (when I became an apprentice). It was given in the way described, commencing with 1-drop doses, increasing to 20, and then decreasing to 1-drop doses. The drops were the black, evil-smelling stuff known as ol. animalis, distilled from bones. It was put up in 1-oz. bottles, and the "quack" charged 2*s.* 6*d.* for same. The cures were marvellous, and I believe the originator was an old woman named Cotton, who lived in Kenilworth. Perhaps this may be of service to your correspondent.—*C. Spencer* (Leamington).

The Clergy and the Stores.

Why is it that so many clergymen are always grumbling about the prices they are called upon to pay? No satisfactory reply to this vexed question has ever been obtained; usually, in fact, when ministerial wailings are heard a conciliatory attitude is adopted by the aggrieved tradesman. A clergyman in a small town in the North, however, received a delightfully apt rebuke the other day, which he accepted in a very chastened manner. This gentleman alleged that a chemist was charging him twopence more than the stores. "It is nothing short of downright robbery, sir," he concluded warmly. "Look here, Mr. ——," said the pharmacist suavely, "Mr. A. receives 100*l.* per annum, Mr. B. 180*l.*, and you are paid 400*l.* for preaching the same Gospel. There is surely something very far wrong here, too!"—*A. R.* (29/70).

Miscellaneous Inquiries.

We do not as a rule repeat information given in this section during the past twelve months. When references are given to past issues, these should be consulted. Back numbers for the past five years can generally be obtained from our office at the published prices. We do not undertake to analyse and report upon proprietary articles.

A. W. H. (101/47).—Homœopathic Medicines.—The preparation of the mother-tinctures used in homœopathy was explained in the *C. & D.*, March 20, 1909, p. 474, but from the concluding remark in your letter it is probable that you are only desiring to know the method of diluting the tinctures. Hahnemann, the father of homœopathy, seems to have adopted a centesimal scale, but this has now been generally displaced by the decimal scale, which is more convenient. In the decimal scale the original quantity of tincture is diluted progressively by ten, so that the first dilution (1x) contains 1 in 10, the second dilution (2x) contains 1 in 100, the third dilution (3x) 1 in 1,000 of the original medicament. As solutions and tinctures are made so that the part of the drug is to be contained in every 10 parts of the diluent, each tincture or solution (with some few exceptions) is equal or equivalent to the first decimal dilution (1x). The exceptions are such sparingly soluble substances as phosphorus, arsenic, and sulphur, which require more solvent, and in such cases the product should contain 1 part of drug in 100 parts or in 1,000 parts of diluent, dependent on the degree of solubility, and this product is therefore the second decimal (2x) or the third decimal (3x) dilution. The method of making each dilution after the original solution or tincture has been prepared is to take 1 volume of the liquid to be diluted and to add 9 volumes of diluent or vehicle (usually alcohol). The first dilution, prepared in like manner, makes the second dilution, and so on. The pilules are prepared by moistening plain sugar pilules with the proper tincture.

J. M. D. (Bombay) (98/23).—Black Writing on Ivory.—The only satisfactory ink for producing black characters on ivory is solution of nitrate of silver. We find it stated that a 10-per-cent. solution produces an intense black, but the writing needs exposing to the sun, and the surface should have been previously prepared by washing with strong solution of ammonia.

Extract (96/28).—(1) Paint Manufacture.—Before starting on the manufacture of paints on a large scale it will be necessary for you to get a good insight into the subject by reading up the literature. The following are some books which are useful for this purpose: Parry and Coste's "Chemistry of Pigments" (Scott, Greenwood, 12*s.* 6*d.*); Jennings's "Paint and Colour Mixing" (Spon, 5*s.*); Hurst's "Painters' Colours, Oils, and Varnishes" (Griffin, 12*s.* 6*d.*); Jennison's "Manufacture of Lake Pigments" (Scott, Greenwood, 7*s.* 6*d.*). The chapters on pigments in Thorpe's "Dictionary of Applied Chemistry," vol. iii., and in Spon's "Workshop Receipts," vol. iii., may also be studied with advantage. (2) Laundry-blue Manufacture.—For this the machinery required consists of an edge-runner for grinding together the ultramarine, bicarbonate of soda, and glucose, sifting-apparatus, presses for forming the squares or circles of blue, and drying-stoves. The presses employed make a large number of squares or circles at the same time.

R. P. C. (84/29).—Full particulars of the method of obtaining protection for an invention or name are given every year in *The Chemists' and Druggists' Diary*, to which we must refer you. If you are inexperienced in these matters you will find it best to employ an agent. Advertisements of patent and trade-mark agents appear in The Chemist and Druggist.

Y. L. (36/30).—Rubber Coagulant.—We are unable to identify this exactly, but it has many of the characteristics of salicylic acid and is organic. The odorous material has been introduced probably for the purpose of disguise. The powder yields a violet colour with ferric chloride and forms a tri-bromo compound.

L. P. V. (93/7).—Shampoo-powder for Dry Use.—We gave a formula for this in the *C. & D.*, March 18, index folio 417. Here is another of rather different composition:

Borax	2 parts
Sulphur	5 parts
Wood-flour	2 parts
Oatmeal	25 parts
Rice-flour	30 parts
Orris-root	2 parts

Each ingredient is to be in fine powder and thoroughly dried before mixing.

D. F. A. (93/22).—Home-made Hard-soap.—See *C. & D.*, September 10, 1910, index folio 428.

J. W. R. (93/30).—(1) Megilp for Artists' Use.—The usual form is made by mixing equal parts of mastic varnish and a drying-oil, a thin amber-coloured jelly resulting. A modification is to shake together linseed or poppy oil 2 parts with lead-acetate solution (saturated) 1 part, and then to add mastic varnish 2 parts. This yields a creamy mixture, which, however, becomes transparent on drying. (2) Clearine as used in crystoleum painting consists of a mixture of castor oil 3 parts in alcohol 1 part. Another variety is a mixture of Canada balsam ½ oz. in benzine 3 oz.

F. J. (97/39).—Neuralgia-discs.—There is no formula under the number you give. Perhaps your reference is incorrect.

E. M. (108/19).—Mixtures containing sodium salicylate and potassium bicarbonate frequently become quite dark in colour. See "The Art of Dispensing," p. 243.

S. R. H. (109/70).—"Izal" for disinfecting-purposes is a 30-per-cent. emulsion of izal oil with gelatin and water.

Gadus (110/18).—The Constituents of Cod-liver Oil.—The researches of Heyerdahl about twenty years ago are fully described in the late Dr. F. Peckel Möller's book entitled "Cod-liver Oil and Chemistry," as to which you might apply to Messrs. Peter Möller, Ltd., High Holborn, London, W.C. Heyerdahl showed that cod-liver oil contains 20 per cent. of therapin and about the same of jecolein, the former being a combination of therapic acid and glyceryl, and the latter of jecoleic acid and glyceryl. Therapic acid is peculiar among fatty acids in being a four-bonded compound, and it is to this property that the exceptional nutritive powers of cod-liver oil are due. Neither therapin nor jecolein is soluble in alcohol. In fact. Heyerdahl's researches demonstrated that in order to get the benefits of cod-liver oil it must be taken itself.

Retrospect of Fifty Years Ago.

Reprinted from "The Chemist and Druggist," July 15, 1861.

Reviews.

A Manual of Botany; including the Structure, Functions, Classification, Properties, and Uses of Plants. By Robert Bentley, F.L.S., M.R.C.S.E.; Professor of Botany in King's College, London; Professor of Botany and Materia Medica to the Pharmaceutical Society of Great Britain; Medical Associate of King's College, London. Illustrated by nearly 1,200 woodcuts. (London: John Churchill, New Burlington Street. 8vo. Pp. 811.)

Professor Bentley's manual is a most valuable addition to the works already published on botanical science, and peculiarly adapted to the requirements of the student, being written in language so plain and simple as to be suited to the comprehension of the merest tyro, while those who have made some progress in the science will find in it much to instruct and interest them. The illustrations, which reach nearly 1,200, are well chosen, and admirably executed by Bagg in the best style of wood-engraving. The first part of the work comprises organography, or structural and morphological botany; and treats of the elementary structure of plants, their organs of nutrition, or vegetation and reproduction, and the theoretical structure or general morphology of the flower. This portion is profusely and beautifully illustrated; but we regret that the derivations of the different terms employed have been omitted, as to very many they may prove of the greatest assistance.